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PHASE	E6
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COMMENT(S)	

PROPOSAL SUBMITTED BY

NAME ERIC BOLANDER CONST. CO. 154727

ADDRESS WINCHESTER ROAD

CITY LIBERTYVILLE, ILLINOIS 60048

79 1

R.R. INSURANCE ORIGINAL REQUIRED.

LETTING September 3, 1971

STATE OF ILLINOIS

DEPARTMENT OF PUBLIC WORKS AND BUILDINGS

DIVISION OF HIGHWAYS

Springfield, Illinois

62706

NOTICE TO BIDDERS, SPECIFICATIONS, PROPOSAL, CONTRACT and CONTRACT BOND

Federal-aid ROUTE NO. 42

PROJECT NO. _____

SECTION 8(HB and VB)

Lake COUNTY

Railroad Grade Separation Structure And Grade Separation Structure Construction Funds

CONTRACT NO. 28266

C-91-344-64

PREPARED BY

CHECKED BY 33

Form B.D. 350, Rev. 1—Aug., 1966

(21852—50M—7-70) 5

EXHIBIT C

79

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS AND BUILDINGS
DIVISION OF HIGHWAYS

NOTICE TO BIDDERS

1. **Time and Place of Opening Bids.** Sealed proposals for the construction of the bridge work described herein will be received by the Department of Public Works and Buildings at the office of the Division of Highways, Springfield, Illinois, until 10:00 o'clock A.M., (CDST) September 3, 19 71, and at that time publicly opened and read.

2. **Description of Work.** (a) The proposed improvement is officially known as F.A. Route No. 42, Project -, Section 8(HF and VB), in Lake County.

(b) The proposed improvement includes the construction of a 3-span railroad grade separation structure (carrying Greenwood Ave., over C.& N.W. R.R.) spans 2@44'-5 1/2" and 1@71'-5 1/4" on R.C. open piers and pile bent abutments @ Station 15/43.11 and a 2-span grade separation structure (carrying Greenwood Ave. over the relocated F.A. Route 42) spans 2@56'-0" on R.C. open piers and pile bent abutments @ Station 20/00 (Greenwood Ave.)

(c) Approximate distance in miles by road from nearest municipality:

Bridge at Station	Miles		Municipality
15/43.11		in	Waukegan
20/00 (Greenwood Ave.)		in	Waukegan

3. **Instructions to Bidders.** (a) Plans and proposal forms for this work will be available in the office of the District Engineer for office examination only. Plans and proposal forms will not be loaned to prospective bidders, but may be purchased at the office of the Division of Highways, Springfield, Illinois. A charge of $10.00 will be made for each set of plans and proposal forms. Payment for plans and proposal forms shall be made by check, bank draft or money order, payable to the order of the State Treasurer of Illinois. Such payment will become the property of the State of Illinois, and will not be refunded. Currency will not be accepted.

(b) Plans and proposal forms will not be issued separately.

(c) All proposals must be accompanied by a bank cashier's check, bank draft, or properly certified check for the amount required as provided in the "Standard Specifications for Road and Bridge Construction", adopted by said Department.

(d) Each bidder must have on file with said Department, at least seven days prior to date of receiving bids for this section, a satisfactory financial statement showing the condition of his business as of a date approved by the Department. New statements must be submitted annually thereafter, unless specifically requested oftener. Statements shall be submitted on forms furnished by the Department and shall be prepared by a licensed or certified public accountant, as outlined in the Standard Specifications.

With each financial statement filed with said Department, as hereinabove outlined, the bidder shall also file an experience questionnaire, submitted on forms furnished by the Department for this purpose.

No proposal will be issued unless the bidder has complied strictly with the above requirements, and the financial statement and experience questionnaire have been approved by said Department.

4. **Rejection of Bids.** The Department of Public Works and Buildings reserves the right to reject any or all proposals and to waive technicalities.

By order of the
DEPARTMENT OF PUBLIC WORKS AND BUILDINGS

August 6, 19 71

William F. Cellini
Director

Form B. D. 351A (21854—50M—6-70) 10

CLARIFICATION

In the Schedule of Prices where the unit of measurement is LUMP SUM, the unit price column has been XXXXXed out. It will be mandatory to enter only the lump sum bid price in the total price column. Do not enter a figure in the XXXXXed out unit price column.

F.A. Route 42
Section 8-HB & 8-VB
Lake County

CHECK SHEET
FOR
MIMEOGRAPHED SUPPLEMENTAL SPECIFICATIONS
AND SPECIAL PROVISIONS

June 1, 1971

SPECIFICATIONS AND PROVISIONS APPROVED OR ACCEPTED
BY THE FEDERAL HIGHWAY ADMINISTRATION

1.X R. R. Protection Liability Form (Eff. 6-10-58) (Rev. 9-29-67).
2. Required Contract Provisions - All Federal-aid Construction Contracts (Form PR 1273), (Rev. 10-69).
3. Federal-aid Proposal Notice.
4. Certification Equal Employment Opportunity.
5. State Required Contract Provisions - All Federal-aid Construction Contracts (Eff. 2-1-69).
6. Specific Equal Employment Opportunity Responsibilities - Federal-aid Contracts (Eff. 3-20-69) (Rev. 3-25-69).
7.X Nondiscrimination Clauses (Non-Federal-aid Contracts) (Rev.1-2-71).
8.X Specific Equal Employment Opportunity Responsibilities - Non-Federal-aid Contracts (Eff. 3-20-69).
9.X Required Provisions - State Contracts (Eff.4-1-65) (Rev. 2-1-69).
10.X General Prevailing Wage Rates (BD 696A) (Rev. 10-67).
11. Grating (Eff. 6-15-67) (FHWA App. 6-20-68) (Rev. 8-1-68).
12. Bridge Deck Sealant (Eff. 3-1-63) (Rev. 8-1-68) (FHWA App. 1-22-69).
13. Pozzolanic Base Course (Eff. 4-1-64) (Rev. 7-1-71) (FHWA App. 1-22-69).

SPECIFICATIONS AND PROVISIONS USED BY
DIVISIONS OF HIGHWAYS
(FHWA Approval Pending or Being Requested)

14.X Errata to the Standard Specifications for Road and Bridge Construction, adopted January 2, 1971, (Effective July 1, 1971).
15.X Portland Cement Concrete Pavement, Continuously Reinforced Portland Cement Concrete Pavement, Curing Portland Cement Concrete (Eff. 7-1-71).
16.X Stabilized Shoulders and Sub-base (Eff. 10-1-70) (Rev. 7-1-71).
17. Sub-Base Granular Material Type C (Eff. 12-01-69).
18. Sign Face Materials, Demountable and Cut-out Message Units and Borders (Eff. 8-15-70) (Rev. 7-1-71).
19. Temporary Project Water Pollution Control (Eff. 7-1-70).
20.X Piling (Eff. 7-1-71).
21.X Drain Pipe and Tile (Eff. 7-1-71).
22. Metals (Eff. 7-1-71).
23.X Sodding and Planting (Eff. 7-1-71).
24.X Bituminous Materials (Eff. 7-1-71).
25.X Roadway Excavation (Eff. 7-1-71).

STATE OF ILLINOIS

SPECIAL PROVISIONS

The following Special Provisions supplement the "Standard Specifications for Road and Bridge Construction", adopted January 2, 1971, the "Manual of Uniform Traffic Control Devices for Streets and Highways", dated May, 1963, and as revised and including Chapter 6 for "Highway Construction and Maintenance Operations", adopted June, 1970, and the "Mimeographed Supplemental Specifications and Special Provisions", noted herein, which govern the construction of FA Route 42, Section 8-HB & H-VB, in Lake County, and in case of conflict with any part or parts of said Specifications, the following provisions shall take precedence and shall govern.

WORK INCLUDED IN THE CONTRACT. The work under this contract consists of the furnishing of all materials and labor necessary to complete the construction of detours, grading, drainage structures, a retaining wall, two bridges carrying Greenwood Avenue over FA Route 42 and the Chicago and North Western Railway, and surfacing of Greenwood Avenue and Sand Street including all appurtenant and collateral work as shown on the plans.

KEEPING ROAD OPEN TO TRAFFIC. The Contractor shall conduct his operations in such a manner as to maintain two-way traffic on both Greenwood Avenue and Sand Street and their respective detours.

SEQUENCE OF OPERATIONS. The Contractor shall conduct his operations in accordance with the following sequence of operations or as directed by the Engineer.

1. Construct Detours A, B, and C.
2. Divert Greenwood Avenue traffic to Detour C and Sand Street traffic to Detours A and B.
3. Construct the bridges carrying Greenwood Avenue over F.A. 42 and the Chicago and North Western Railway.
4. Complete the grading and paving of Greenwood Avenue from Sand Street to the west end of the project.
5. Complete the grading and paving of Sand Street for its entire length.
6. Divert traffic from Detours B and C to Greenwood Avenue and Sand Street and remove Detours B and C.
7. Complete the grading and paving of Greenwood Avenue from the beginning of the project to Sand Street.
8. Divert traffic from Detour A to Sand Street and remove detour.

COOPERATION BETWEEN CONTRACTORS. The Department either has or intends to enter into a contract for the construction of roadway and bridges within the vicinity of Section 8-HB & 8-VB including the following:

Section 8	Grading, Drainage and Pavement of F.A. Route 42

Work on this section and the above listed contract may be carried on simultaneously. The Contractor for this section shall cooperate with the Contractor for the above listed contract in accordance with Article 105.08 of the Standard Specifications.

No additional compensation will be allowed the Contractor for this section for delays or inconvenience resulting from delays in construction by the Contractor for the above listed contract.

Railroad's Protective Public Liability and Property Damage Liability Insurance

The Contractor shall perform his work in accordance with Article 107.11 of the Standard Specifications, except that the limits of the Railroad's Protective Public Liability and Property Damage Liability Insurance coverage for anyone accident shall be increased from $500,000/$1,000,000 as specified in said Standard Specifications to $500,000/$4,000,000 for this improvement.

Placement of Approach Piles: Creosoted timber approach piles shall be driven to the length specified on the plans, or to a maximum of 24 ton bearing, whichever is achieved first.

In order that the above may be properly accomplished the Contractor shall precore approach piles to a depth equal to 50 percent of the length of piles, 15 feet in length or shorter, and to 75 percent of the length of piles over 15 feet in length.

Precoring though the embankment shall be in accordance with Article 513.09(c) of the Standard Specifications except depth of precoring shall be as herein specified.

POROUS GRANULAR EMBANKMENT. This item shall consist of furnishing, transporting, and placing porous granular material where required by the plans or as directed by the Engineer in accordance with Section 209 of the Standard Specifications, except that the material shall conform to the following gradations:

95	-	100%	passing the 6" sieve
20	-	60%	passing the No. 4 sieve
0	-	20%	passing the No. 50 sieve
0	-	10%	passing the No. 200 sieve

or

If the Contractor elects he may furnish broken stone. This material must be free from foreign material and shall be limited to a maximum size of two feet in any one dimension.

This work will be paid for at the contract unit price per cubic yard for POROUS GRANULAR EMBANKMENT.

REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL. This item of work shall consist of the removal of unsuitable material to the lines and grades shown on the plans or as directed by the Engineer, and the satisfactory disposal of same in accordance with the applicable portions of Section 202.03 of the Standard Specifications. After the removal of the unsuitable material, the Contractor shall replace the excavated portion with porous granular material. The porous granular material shall be placed in an elevation approximately two feet above the water table.

The quantity measured for payment shall be determined by taking cross sections before and after the excavation has been completed and the volume shall be computed in cubic yards by the method of average end areas.

This work shall be paid for at the contract unit price per cubic yard of REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL, measured as specified herein and which price shall include all labor, materials, and equipment necessary to complete the work as herein specified.

WATER APPLIED. The second paragraph of Article 207.08 of the Standard Specifications shall be revised to read:

> "If the Engineer orders the embankment material to be sprinkled, payment will be made for the furnishing and application of water at the contract price per unit (1,000 gallons per unit) for WATER APPLIED, which price shall include full compensation for furnishing all material, labor equipment, and tools necessary for obtaining, transporting, and applying the water."

COMBINATION CONCRETE CURB AND GUTTER. This item shall be constructed in accordance with the applicable portions of Section 616 of the Standard Specifications and Standard 2130.

No additional compensation shall be given for saw cutting existing concrete nor for making curb and gutter transitions to match existing or proposed concrete Curb and Gutter.

STEEL PLATE BEAM GUARD RAIL, SINGLE RAIL:

The plans indicate that Steel Plate Beam Guard Rail is to be installed at certain locations along the detours. The estimate quantity being 450 lineal feet. It is the intent to bring to the Contractor's attention that this guard rail is to be salvaged and reinstalled at permanent locations along the roadway improvement as directed by the Engineer. This work shall not be paid for separately but shall be included in the contract unit price per lineal foot of STEEL PLATE BEAM GUARD RAIL, SINGLE RAIL.

SEEDING. This work shall be performed and paid for in conformance with Section 642 of the Standard Specifications.

The seeding as called for in the typical sections and plans shall be Class II and Class III. The fertilizer nutrients used shall be applied at the rate of 160 lbs. per acre and shall have a ratio of 1:1:1.

Spring seeding shall be from December 1 to June 30; fall seeding from July 1 to October 15 but can be extended by fifteen (15) days upon the written approval from Roadside Development Section or at the request of the Engineer.

No seeding shall be permitted during the month of November.

SODDING. This work shall conform to Section 644 of the Standard Specifications with the following added requirement:

Sodding Time: Under no condition shall sodding take place during the months of July and August

MULCHING. All seeded areas shall be given a covering of mulch in accordance with Section 643 of the Standard Specifications, with the following added requirements:

The mulch covering shall be applied in accordance with Method 2.

The rate of distribution of the mulch shall be 2 tons per acre, or as determined by the Engineer.

The rate of application of the emulsified asphalt to the mulch shall be 75 gallons per ton of mulch, or as directed by the Engineer.

FINE AGGREGATE FOR CLASS I BITUMINOUS MIX. Gradation FA 3 shall be used for binder, leveling binder, and surface courses for Class I and in mixture for cracks, joints, and flangeways. This gradation may also be obtained by blending gradation FA 1 or FA 2 with gradation FA 10 or with the following gradation:

Percent Passing # 10	98 ± 2
Percent Passing # 40	90 ± 10
Percent Passing # 80	50 ± 30
Percent Passing #200	7 ± 7

provided that a compatible gradation results.

FINE AGGREGATE FOR PORTLAND CEMENT PAVEMENT. Gradation of fine aggregate for Portland Cement pavement shall be FA 2.

BINDER COURSE MIXTURE B AGGREGATE. For Bituminous Concrete Binder Course, Mixture B may be used in lieu of Mixture A with the approval of the Engineer. Mixture B will be as specified in Article 406.12, or as specified below.

The gradation of the coarse aggregate for Class I Mixture B may, at the option of the Contractor and approval of the Engineer, be obtained by blending gradation CA 13 or CA 16 with aggregate conforming to the following gradation:

Passing 1" sieve	100%
Passing 3/4" sieve	95 ± 5
Passing 1/2" sieve	45 ± 15
Passing #4 sieve	5 ± 5

Blending of the coarse aggregate shall be done at the Contractor's hot mix plant by a mechanical feeder conforming to the requirements given in Article 802.01 (d).

BITUMINOUS SURFACING. Bituminous surfacing shall be governed by the applicable portions of Section 406 of the Standard Specifications and as specified herein.

1. RC 70 shall be used for priming P.C.C. and Bituminous Concrete Bases.

2. For Bituminous Concrete Binder Course use Mixture B as specified in Article 406.12; for leveling course use Mixture C.

3. Asphalt for Class I Bituminous Mixture AC 70-85 shall be used.

4. For Bituminous Concrete Surface Course Class I, CA 16 may be used in lieu of CA 13.

5. Tar RT-1 or RT-2 shall be used for priming aggregate bases.

Basis of Payment. This work will be measured and paid for in accordance with Articles 643.06 and 643.07 of the Standard Specifications.

STABILIZED BASE COURSE. The Stabilized Base Course shall be constructed according to the typical drawings and sections shown in the plans, and the applicable portions of the Specifications for Bituminous Aggregate Mixture, contained in the Mimeographed Supplemental Specifications (for Stabilized Shoulders and Sub-Base), effective October 1, 1970, revised July 1, 1971, except for the following:

1. All references to Stabilized Shoulders and Sub-Base in said Specifications shall be interpreted to mean Stabilized Base Course.

2. No layer of the Stabilized Base Course shall be laid greater than four (4) inches in compacted thickness, provided the required density is obtained; otherwise the mixture shall be placed in layers of a lesser thickness as determined by the Engineer. In either case, each layer of the Stabilized Base Course shall be rolled with a pneumatic-tired tandem or three-wheel roller meeting the requirements of Article 801.01 of the Standard Specifications and as directed by the Engineer.

3. The width of measurement shall be from edge to edge of the finished surface of the Stabilized Base Course as shown on the plans.

4. The bituminous material used for this work may be Asphalt Cement Grades 120-150; 100-120; 85-100; or 70-85; and as approved by the Engineer.

5. The first layer of the bituminous mixture shall be compacted to a density of not less than 88% of the theoretical density as defined in said mimeographed Special Provisions. Succeeding layers shall be compacted to a density of not less than 93%.

6. The Granular Material used shall be 100% crushed stone or crushed gravel gradation CA 6.

The Stabilized Base Course will be paid for at the contract unit price per sq. yd. for STABILIZED BASE COURSE of the thickness specified, which price shall include all labor, materials, equipment, preparation of sub-grade and all incidentals necessary to complete the work as shown on the plans and as herein specified.

STABILIZED BASE COURSE, 9" AND STABILIZED BASE COURSE, 11". Tolerance in thickness of the bituminous aggregate mixture for base course construction shall be as specified for Portland Cement Concrete pavement in Article 408.21 of the Standard Specifications, with the following exceptions:

a) Change length of unit area from 1,000 feet to 500 feet.

b) Add to this paragraph: "The Contractor shall provide men and equipment necessary to secure the cores prior to placing surfacing material and as directed by the Engineer. The cost of doing this work will not be paid for separately but shall be considered incidental to the contract bid price for Stabilized Base Course."

g) Change this paragraph to read: "When the average thickness of a unit is less than specified plan thickness, the deficiency may, upon approval of the Engineer, be made up by placing additional base course or surfacing material at the Contractor's expense. If conditions are such that the deficiency cannot be corrected in this way, the contract unit price shall be adjusted downward in the ratio of constructed thickness to specified plan thickness unless such deficiency exceeds 20% of specified plan thickness. Units with thickness deficiencies of 20% or more shall be removed and replaced with base course of the specified thickness. The cost of the thin base course and its removal shall be borne by the Contractor.

CONCRETE MEDIAN, TYPE C-4 (SPECIAL) Concrete Median, Type C-4 (Special) shall be constructed similar to P.C. Concrete Median, Type C-4 except that it shall have a variable width and depth as shown in the plans.

Included in this work is the preparation of the existing pavement to receive the grout and bars.

This work will be paid for at the contract unit price per square foot for CONCRETE MEDIAN TYPE C-4 (SPECIAL), measured in place, which price shall be payment in full for furnishing all labor, materials and equipment necessary to complete the work as shown or ordered by the Engineer and as herein specified.

CONCRETE MEDIAN SURFACE 4". This item shall be built in accordance with Standard 2122-- and applicable portions of Section 624 of the Standard Specifications. The concrete median shall be measured in place and the area computed in square feet. This work will be paid for at the contract unit price per square foot, measured as specified, which price shall include all required expansion joints, for CONCRETE MEDIAN SURFACE 4".

PIPE CULVERT, TYPE I, 36" (DETOUR)
PIPE CULVERT, TYPE I, 48" (DETOUR) This item shall be constructed in accordance with the type and size as indicated in the plans and Section 511 of the Standard Specifications. The pipe culverts of the different type and diameters will be measured by the lineal feet in place. After the detour is no longer needed for construction of Greenwood Avenue and is to be removed as determined by the Engineer, the pipe culverts will become the property of the Contractor. This work will be paid for at the contract unit price per lineal foot of PIPE CULVERTS, TYPE I, 36" (DETOUR), PIPE CULVERTS, TYPE I, 48" (DETOUR) which price shall include the installation, removal, and salvage value of the pipe, measured as specified.

TRAFFIC CONTROL AND PROTECTION, STANDARD 2310 (SPECIAL): This item consists of all traffic control devices and items required by Standard 2310 and the Traffic Control Specifications made a part hereof for detours A, B, and C as shown on the plans. Temporary pavement marking shall be maintained on detours A, B, and C during their use. Detour C shall be striped for four (4) nine-foot lanes. The pavement striping shall be maintained to the satisfaction of the Engineer.

This item will be paid for at the contract unit price per each for TRAFFIC CONTROL AND PROTECTION, STANDARD 2310 (SPECIAL).

DETOURS A, B, AND C. The quality of the riding surface shall be maintained to the satisfaction of the Engineer. The detours shall be maintained and constructed by the Contractor in accordance with the applicable portions of Section #636 and the plans.

TEMPORARY FENCE. This work shall be constructed in accordance with Section 629 of the Standard Specifications where applicable as shown on the plans or as directed by the Engineer. This work will be measured for payment in lineal feet in place. The length paid for shall be the overall length, parallel to the ground slope, from center to center of end posts. After the fence is no longer of use in construction it shall be removed at the direction of the Engineer and become the property of the Contractor. This work shall be paid for at the contract unit price per lineal foot of TEMPORARY FENCE, measured as specified, which price shall include the furnishing of all material, installation of the fence, and removal of fence at the direction of the Engineer. The contract unit price for Temporary Fence shall reflect the salvage value of all material removed.

STANDARDS IN THE PLANS. The Standards with the revision number listed in the Index of Sheets included in the plans shall hold precedence over Standard numbers listed in the Special Provisions or plans of this contract.

BUILDING REMOVAL. This item shall consist of the complete demolition and removal of all buildings shown on the plans unless otherwise noted herein, in accordance with these Special Provisions and with the approval of the Engineer. The Contractor shall receive no additional compensation for delays incurred because of difficulties arising from refusal of tenants to vacate.

These buildings are shown on the plans. The Contractor shall remove each building together with all foundations and walls down to a plane level with the surrounding earth. He shall remove all fences and other obstructions in like manner. In the event that an underground storage tank exists within the building to be wrecked, or on the premises of same, it shall be removed and disposed of by the Contractor. He shall fill all excavated openings with suitable materials as directed by the Engineer. This work shall be considered incidental to the contract, and no additional compensation will be allowed.

The removal of foundations or walls and the filling of excavated openings at locations where buildings have been previously removed shall be considered incidental to the contract and no additional compensation will be allowed.

The Contractor shall not remove, damage or disturb any appurtenance of private or public utilities. The Contractor shall contact the public or private utility involved and arrange for the satisfactory removal of its facilities, in accordance with respective requirements and regulations of the utility involved without any additional compensation thereof.

The Contractor shall conduct his operation in such a manner as to avoid hazards to persons and vehicles traveling and shall take proper care to keep all burning localized and under constant control. The Contractor will be allowed to

burn only after approval is given by the Engineer and the local authorities. Approval by the Engineer does not relieve the Contractor from conforming to all existing ordinances and regulations governing such work and from liability for damages and claims.

The Contractor shall at his own expense and in his own name obtain all permits, certificates and licenses required by the local authorities, the State of Illinois, and the United States of America and shall carry on all work under this item in strict conformity therewith and shall save and keep harmless the State from any expense incurred thereby.

The Contractor shall at all times comply with all Federal and State laws, local ordinances and regulations which affect in any manner the conduct of his work. He shall indemnify, keep and save harmless the State or its representatives against any claim or liability arising from or based on the violation of any such law, ordinance or regulation whether by himself or his employees.

The Contractor shall indemnify, keep and save harmless the State or any of its agents or employees, against all suits or claims in accordance with the applicable portions of Section 107 of the Standard Specifications.

Basis of Payment. This item of work will be paid for at the contract lump sum price for BUILDING REMOVAL, which price shall be payment in full for completing the work as specified. All salvage shall be reflected in the bid price.

TEMPORARY SHEETING AND BRACING. For all operations adjacent to the railroad tracks, where sheeting and bracing of the excavation or other precautions are specified or necessary to insure the safety of stability of the rail lines or roadway pavements, the Contractor shall submit to the Engineer and the railroad involved, for their examination, the method, equipment and design of such sheeting, bracing and other details which he proposes to use. Such examination shall not relieve the Contractor from responsibility for failure of the work to function as intended due to design, materials, construction or maintenance.

Basis of Payment. This work will be paid for at the contract unit price per sq. ft. for TEMPORARY SHEET PILING including all material, labor and equipment necessary to construct and remove the temporary sheeting as directed by the Engineer. The contractor shall include in his bid price the salvage value of the sheeting when it is removed and becomes the property of the Contractor.

SUB-PIERS

Description. The work under this item shall consist of constructing the sub-piers complete with bells for support of the piers, as shown on the drawing, or as ordered by the Engineer and herein specified.

The work includes the excavation of all material encountered, both wet and dry, except rock; the disposal of excavated material; the furnishing, placing and removing of all temporary casing; the furnishing and placing of permanent steel lining; the bailing and removal of water; the removal of any abandoned utilities or other obstructions encountered; the furnishing and placing of sub-pier concrete; the furnishing and placing of sand backfill or grout; and all other appurtenant and collateral work necessary to complete the construction of the sub-piers as specified.

Soil borings taken at the site are shown on the plans. There is, however, no expressed or implied guaranty as to the accuracy or completeness of any said soil boring information. The Contractor shall satisfy himself by such methods as he may prefer as to the character of the ground.

The use of explosives will not be permitted in the construction of the sub-piers unless given prior written approval by the Engineer.

Reinforcement will be paid for at the contract unit price for Reinforcement Bars.

If boulders, two cubic feet or over in size, are encountered in the construction of the sub-piers, such boulders shall be classified as "rock" and shall be removed under provision of extra work as specified in Article 104.03, and will be paid for under the provisions of Article 109.04 of the Standard Specifications. The removal of boulders less than two cubic feet in size together with hardpan, clay, shale or similar materials shall not be classified as rock excavation and the cost of such removal shall be included in the contract unit price for Caisson Concrete.

MATERIALS AND CONSTRUCTION METHODS. Materials, equipment, and construction methods shall be in accordance with requirements of Section 503 and 504 of the Standard Specifications except as herein modified.

Concrete shall be Class X.

The sub-piers shall be excavated by drilling with a power driven auger type drilling rig or by hand excavation. The shaft shall be accurately centered at the top of the sub-pier and shall be installed plumb. Any sub-pier out of center or plumb beyond the tolerance specified, shall be corrected by the Contractor at no additional expense to the State before any reinforcing steel or concrete is placed. The maximum variation of any caisson at the cut-off elevation shall be two inches and no caisson shall be out of plumb more than one percent (1%) of its depth.

The bottoms of the sub-piers shall be provided with a bell as shown on the plans. Prior to any excavation being made for a sub-pier bell, the Engineer will immediately sample and test the foundation soil at the bottom of the sub-pier shaft excavation to determine the suitability of the soil for foundation purposes. The Contractor shall assist the Engineer in obtaining such soil samples. Upon determination that the soil for foundation purposes is suitable, the sub-pier bell for that shaft shall be excavated so as to form a bearing area of the size and shape shown on the plans or ordered by the Engineer. The bell and pad height shall be not less than that shown on the plans.

The elevations shown on the plans for the bottoms of the sub-piers are approximate and may be raised or lowered, as determined by the Engineer. The bottom of the sub-piers shall be manually cleaned of any mud and other loose material and pumped dry for inspection purposes before the placing of reinforcing steel and concrete.

Temporary steel casings will be required during drilling of the sub-piers to prevent cave-ins and displacement of the soils from the wall of the shaft and to shut off ground water. This casing shall be of ample strength to withstand handling stresses, the pressure of the surrounding soils and shall be watertight. The inside diameter of the steel casing shall be not less than the nominal dia-

meter of the sub-pier shaft as shown on the plans. Casing shall be left in place when considered necessary by the Engineer, and if so ordered, shall be paid for under the provisions of Article 109.04 of the Standard Specifications.

After drilling is completed, the Contractor shall install casing for the protection of personnel entering the sub-piers. Casing used for this purpose shall be removed prior to installing the permanent linings.

If sub-piers are to be hand excavated, the excavation shall be made of sufficient size to accommodate the lagging, sheeting or lining so that the concrete may be placed to the dimension, lines and elevations shown on the plans. The excavation shall be performed in such manner and the bracing so constructed that there will be no caving or movement of the earth outside the neat lines of the work. Wooden lagging for lining the sub-pier excavation shall be sound new lumber, dressed and matched, with radial joints. No piece of wooden lagging shall be more than five feet, four inches long, except when driving sets are required. Each set of wooden lagging shall be braced with at least two rings of steel bracing, placed in sections and bolted together. Additional rings shall be used if necessary or when ordered by the Engineer. After the steel rings bracing the wooden lagging have been placed, such rings shall not be removed. To properly resist lateral loads that will act on the sub-piers, it is essential that the lagging, sheeting or lining be tight against the surrounding earth and it may be necessary to use lagging or steel sheeting five feet or less in length and to wedge or jack the lagging or sheeting into place. Parts of steel rings or steel lining may extend into the concrete not to exceed two inches, except at the connecting joints of said steel rings or lining, unless otherwise approved by the Engineer. The stub ends of the connecting joints of steel rings or lining may extend into the concrete a greater distance than two inches only if kept free from interference with the reinforcement and as approved by the Engineer. If hand excavated methods are used, the Contractor will not be allowed any additional payment for sub-piers beyond the neat lines shown on the plans.

The Contractor shall protect all sub-pier excavations against surface and rain water and against water which may enter from the sides or bottom. In the event that quicksand, running material, water-bearing strata or other materials are encountered which cannot be excluded by means of the lagging, or casing being used, the Contractor shall use steel sheeting, steel lining or other suitable material and shall perform such work as necessary to seal off such material in a manner approved by the Engineer, without additional compensation therefor.

Pumping of flowing quicksand or running material from the excavation will not be permitted prior to the sealing off of the flow into the excavation of such quicksand or running material except as may be authorized by the Engineer.

The Contractor shall provide and operate all equipment necessary to pump and remove all water that may be encountered in the construction of the sub-piers, without any additional payment therefor. No pumping shall be done during the placing of concrete.

The Contractor shall provide and operate an approved ventilating system for supplying fresh air and exhausting foul air and gases from the sub-piers and provide a safety harness, available for evacuation of personnel.

It is possible that methane or other explosive or noxious gases may be encountered, and the Contractor shall make suitable tests for gases at each sub-pier excavation at the start and end of each shift and at such other times

as the Engineer may direct. If the presence of a noxious gas is indicated, work at that sub-pier location shall be discontinued immediately, the Engineer promptly notified, and work shall not be resumed at said sub-pier location until the necessary safety measures have been taken and further tests indicate the absence of unsafe quantities of noxious gas. A log of the caisson shall be maintained by the Contractor and copies thereof in duplicate shall be furnished to the Engineer. Suitable, safe, weather resistant, explosion-proof electric lamps shall be provided by the Contractor for use during sub-pier excavation, inspection and concreting operations.

Excavated material from the sub-pier excavation shall be considered surplus and shall be removed and disposed of by the Contractor at his expense. The manner and location of disposal shall be determined by the Contractor and shall be subject to the approval of the Engineer. The Contractor shall furnish to the Engineer satisfactory evidence that he has the proper authority for the disposal.

Upon completion of the sub-pier bell, and prior to its final cleaning, a permanent steel liner having an inside diameter not less than the nominal diameter of the sub-pier shaft shown on the plans, shall be placed within the temporary steel casing. This liner shall extend from the surface of the hardpan strata at about elevation 562 to the cut-off elevation of the sub-pier. This liner shall be accurately centered, plumbed and firmly held in place during the concreting operation and for a period of at least 24 hours after the concrete is placed. This liner shall be of ample strength to withstand handling stresses and the pressure of the concrete and shall be watertight.

Concrete shall not be placed in a sub-pier until the bottom excavation of such sub-pier has been approved by the Engineer as being satisfactory.

The Contractor shall provide suitable supports or chairs for holding and aligning the reinforcement away from the walls of the shaft excavation, so as to securely keep the reinforcement in proper position during concreting operations.

During the cleaning and inspection of the bottom, placing of the steel liner and placing of the reinforcement, the sub-pier excavation shall be pumped as required.

Immediately after the sub-pier excavation has passed inspection and the installation of the steel liner and reinforcing steel has been approved by the Engineer, the pumping of water from the excavation shall be stopped. If the flow of water into the excavation has stopped or is slight enough in the opinion of the Engineer that no damage will be done to the concrete, the excavation shall be filled with concrete. Concrete shall be deposited by means of a tremie or "elephant trunk" extended into the excavation of a sufficient distance so that there will be no segregation of the material and in a manner approved by the Engineer. If, in the opinion of the Engineer, the flow of water is considerable, the water shall be allowed to flow freely into the excavation. When the water level has ceased to rise, the concrete shall be placed in the excavation by use of a tremie. The bottom of the tremie shall extend to within a foot of the bottom of the excavation. The tremie may be withdrawn as the concrete is placed, but the bottom shall always be at least one foot below the top of the concrete. The method of placing the concrete shall be subject to the approval of the Engineer at all times and the method used shall be one that will provide a continuous flow with no segregation of the concrete materials.

The concrete shall be allowed to gain strength for a period of not less than 24 hours after completion of the placing, before additional work is performed at this sub-pier.

Before the temporary steel shell is removed, the annular space between it and the permanent steel liner, if there is such space, shall be filled in ... of the two following manners:

1. By filling with a sand-cement grout comprised of not less than 2 1/2 sacks of cement per cubic yard and having a slump not less than four inches nor more than six inches. Sand for this grout shall conform with Article 703.02 of the Standard Specifications. The temporary steel casing may be extracted during the placement of this grout provided a sufficient head of grout is maintained to prevent inward movement of the soils.

2. Filling with successive layers of sand. Each layer shall not exceed twelve inches in depth and shall be flushed down with water in such manner as to consolidate the sands. Each successive layer placed shall be so compacted and the temporary steel casing shall not be moved until the entire annular space is filled with sand and the water level within the annular space is above the natural ground water level. Sand shall conform with Article 703.02 of the Standard Specifications.

Adjacent sub-piers may be constructed simultaneously provided they are not closer than 25-foot centers. At least 24 hours shall have elapsed after completion of the concrete pour at a sub-pier before excavation for an adjacent sub-pier is started that is closer than twenty-five feet. Concrete shall be deposited continuously without any construction joints. If a stoppage should occur, the surface shall be treated as specified in Section 504.13(a) of the Standard Specifications.

In the construction of the sub-piers, the Contractor shall use every precaution to insure that his operation does not cause any damage or settlement to adjacent structures. The Contractor will be required to maintain such structures during his operations and to repair same after the conclusion of his operations. The repairs shall be considered as incidental to this work and the cost thereof shall be included in the contract unit price per cubic yard for this item.

Method of Measurement. No extra or customary measurements of any kind will be allowed in measuring for payment the sub-piers constructed under this item.

A sub-pier shall be considered to consist of two parts, namely a sub-pier shaft and a sub-pier bell. The sub-pier shafts shall be considered to be cylinders of the diameters shown on the plans or as ordered by the Engineer, and to extend from the top of the sub-pier shaft concrete down to the elevation of the foundation material upon which the sub-pier rests. The sub-pier bell shall be considered to consist of the flared portion at the bottom of the sub-pier and lying outside of the limits of the sub-pier shaft.

The actual volume in cubic yards of sub-pier shafts and sub-pier bells constructed as specified and as shown on the plans or ordered by the Engineer will be measured for payment. No additional payment will be made for lagging, sheeting or for steel casings placed and removed or left in place, or for temporary access shaftways, or for any excavation made or concrete placed outside

of the payment lines indicated on the plans for a sub-pier of a specified diameter or as ordered by the Engineer.

Typical payment line limits are indicated on the plans.

Basis of Payment. This work will be paid for at the contract unit price per cubic yard for CAISSON CONCRETE measured as herein specified, which price shall be payment in full for all work and materials for drilling, excavating and constructing sub-piers, for removal and disposal of all excavated materials, for furnishing and installing lagging or sheeting or for steel casings placed and removed or left in place and all other work and materials required to complete the sub-piers as shown on the plans and herein specified.

TRAFFIC CONTROL STANDARDS

(For Use With 1971 Specifications)

Payment for traffic control required by any standard included in the plans will be made as described below.

The Contractor's manner of prosecuting the work or revisions in the phasing of operations may require traffic control to be installed in accordance with a standard other than those included in the plans. In such cases, the standards will be made available to the Contractor at least one week in advance of the change in traffic control. Payment for traffic control required by these added standards will be in accordance with Article 109.04 of the Standard Specifications. Revisions or modifications to increase the traffic control protection shown in the contract shall be submitted prior to the preconstruction meeting and be approved by the Engineer. A reduction of the traffic control shown in the contract will not be allowed.

Traffic Control and Protection Incidental to the Contract. Traffic control protection required under the following standards will be considered incidental to the contract and will not be measured for payment:

Standard 2302
Standard 2303
Standard 2304
Standard 2305
Standard 2306
Standard 2307
Standard 2308
Standard 2314

Traffic Control and Protection to be Paid for on an Each Basis. Method of Measurement: Traffic Control and Protection required under the following standards will be paid for on an each basis:

Standard 2309
Standard 2310
Standard 2317
Standard 2318

Where the contract work to be performed requires longitudinal movement of the work area, each installation of a standard in a new location will be paid for as described above. A lateral movement of the work area causing a change in the location of traffic control devices, but not a longitudinal relocation of the work area will not be considered a new installation.

Basis of Payment: The following traffic control and protection items will be paid for at the contract unit price each for:

TRAFFIC CONTROL AND PROTECTION, STANDARD 2309
TRAFFIC CONTROL AND PROTECTION, STANDARD 2310
TRAFFIC CONTROL AND PROTECTION, STANDARD 2317
TRAFFIC CONTROL AND PROTECTION, STANDARD 2318

This price shall be payment in full for all labor, materials, transportation, handling and incidental work necessary to furnish, install, maintain and remove all

traffic control devices indicated on the appropriate standard at each installation and as approved by the Engineer.

In the event the total value of the work items for which a traffic control standard is required is increased or decreased by more than 10 percent and/or an additional installation is to be paid for, the unit price bid for that standard will be adjusted as follows:

$$\text{Adjusted unit price} = .25P + .75P \left[1 \pm (X-.1)\right] \frac{N_o}{N_f}$$

Where P is the bid unit price for the standard

$$\text{Where } X = \frac{\text{Difference between original and final value of work}}{\text{Original value of work requiring the use of the Standard}}$$

Where (X-.1) is 0 if X is less than 0.1

Where N_o is the number of installations in the original contract

Where N_f is the number of installations as built.

The value of the work items used in calculating the increase or decrease will include only items which have been added to or deducted from the contract under Article 104.03 and only items which require use of the Standard. An adjusted unit price will be determined for work protected by that Standard for an entire contract and will be adjusted only once per contract.

In the event the Department cancels or alters any portion of the contract which results in elimination or non-completion of any portion of the work, payment for partially completed work will be made in accordance with Article 109.06.

Traffic Control and Protection to be Paid for on a Lump Sum Basis. Method of Measurement: Traffic Control Protection required under the following standards shall be paid for on a lump sum basis.

Standard 2311
Standard 2312
Standard 2315
Standard 2316

Where the Contractor's operations result in two or more work areas, each of which requires traffic control in accordance with one of the above standards, each work area installation will not be paid for separately, but will be included in the lump sum price for the type of protection furnished.

Basis of Payment: The following traffic control and protection items will be paid for at the contract lump sum price for:

TRAFFIC CONTROL AND PROTECTION, STANDARD 2311
TRAFFIC CONTROL AND PROTECTION, STANDARD 2312
TRAFFIC CONTROL AND PROTECTION, STANDARD 2315
TRAFFIC CONTROL AND PROTECTION, STANDARD 2316

This price shall be payment in full for all labor, materials, transportation, handling, and incidental work necessary to furnish, install, maintain, and remove all traffic control devices required by the appropriate standard and as approved by the Engineer.

In the event the total value of the work items for which the traffic control standard is required is increased or decreased by more than 10 percent, the contract price bid for that standard will be adjusted as follows:

$$\text{Adjusted contract price} = .25P + .75P \left[1 \pm (X - .1)\right]$$

Where P is the contract price for the standard

$$\text{Where } X = \frac{\text{Difference between original and final value of work}}{\text{Original value of work}}$$

The value of the work items used in calculating the increase or decrease will include only items which have been added to or deducted from the contract under Article 104.03, and only items which require use of the standard. An adjusted contract price will be determined for work protected by that standard for an entire contract and will be adjusted only once per contract.

In the event the Department cancels or alters any portion of the contract which results in elimination or non-completion of any portion of the work, payment for partially completed work will be made in accordance with Article 109.06.

Signs. All signs required by Standards 2301 through 2318 and utilized in the performance of this contract shall meet the approval of the Engineer. The sign base shall be constructed from a durable weather-resistant material, preferably aluminum or plywood. Signs utilizing a base of fabric, fiberboard, or other highly flexible or frangible material will not be permitted.

The sign face shall consist of reflective sheeting with the appropriate screened message. The reflective sheeting shall consist of glass spherical lens elements embedded within a transparent plastic having a smooth, flat outer surface. The sheeting shall be weather resistant and have a protected precoated adhesive backing.

The reflective sheeting shall have the following minimum brightness values at 0.2° and 0.5° divergence expressed as average candlepower per foot candle of incident light per square foot of material. Measurements shall be conducted in accordance with standard photometric testing procedures for reflex reflectors of the Society of Automotive Engineers.

	Silver White		Yellow		Red		Orange	
Divergence Angle	0.2	0.5	0.2	0.5	0.2	0.5	0.2	0.5
Angle of Incidence								
0°	40	17	25	8	10	5	10	5
15°	32	13	20	7	7	4	7	4
30°	20	10	10	4	5	2	5	2

The yellow and red colors shall meet Federal standards. The orange color shall conform to the following centroid and limit requirements based on the Munsell notation.

			HUE	VALUE	CHROMA
2.5	YR.	5.5/14	±1.25	±0.5	±2

The reflective sheeting shall include a precoated pressure sensitive adhesive (Type I) or a tack-free, solvent or heat activated adhesive (Type II), either of

which may be applied without necessity of additional adhesive coats on the reflective sheeting or application surface.

The sheeting surface shall be smooth and flat, easily cleaned, have satisfactory weather performance, and exhibit 85° gloss-meter rating of not less than 40 when tested in accordance with the Test for Specular Gloss, A.S.T.M. Designation: D 523. The sheeting surface shall be readily processed and compatible with recommended transparent and opaque process inks and show no loss of the color coat with normal handling, cutting and application.

Channelizing Devices. The reflective sheeting used on barricades or drums shall conform to the specification for reflective sheeting to be used on construction area signs.

The payment for Traffic Control and Protection refers only to the basic standard number and does not include the revision number which is listed after the dash in the basic number. The work required for Traffic Control and Procection shall conform to the Standards and Special Provisions included in the contract.

BRIDGE SEAT SEALER: This item consists of furnishing the required materials, cleaning the bridge seats, and the application of two coats of a penetrating sealer to the bridge seats of the pier and/or abutments as described herein and all incidental and collateral work as required to perform the work as directed by the Engineer.

Materials. The materials used for the sealer shall be polysulfide liquid polymers and epoxy resins. All containers shall be identified with the PE trademark. The penetrating sealer shall consist of a two component, polysulfide polymer and modified epoxy resin and shall conform to the following requirements:

(a) The material must be able to cure in the presence of moisture.

(b) The material shall not contain mineral filler.

(c) The material shall not contain over 50% solvents.

(d) Viscosity of the blended materials immediately after mixing at 70° F. to 80° F. shall be less than 50 centipoises.

(e) The color shall be clear amber.

(f) The pot life at 75° F. to 85° F. and at approximately 50% relative humidity shall be at least two hours.

(g) The moisture pick-up shall be less than 0.8% when tested for moisture permeability.

(h) The compound shall contain no non-reactive plasticizers such as chlorinated materials, esters, or aromatic base materials.

(i) The tensile strength (proportional limit) shall be 2000 p.s.i. (min.) at 75° F. to 80° F.

(j) The compression strength (proportional limit) shall be 6000 p.s.i. (min.) at 75° F. to 80° F.

Certification. Prior to approval and use of the materials, the Contractor shall submit a notarized certification by the formulator and manufacturer of these materials, stating that they meet the requirements as set forth herein.

Preparation of Bridge Seats. Before the sealer is applied the bridge seats shall be cleaned with high pressure air blast or wire brushes to remove all oil, grime, and loose particles to clean, bare concrete. Surfaces that will not respond to cleaning by air blast or wire brushes shall, if required by the Engineer, be cleaned by sandblasting.

Mixing and Application. The sealer shall be mixed, preferably by power, on a one to one by volume basis, allowed to stand for one full hour induction time and applied to the bridge seats. Application with paint rollers or brushes shall be at the approximate rate of 100 square feet per gallon for the first coat. The second coat shall be applied after the first coat has dried completely and at a rate to provide a uniform coating over the entire area. Extreme care shall be taken to prevent the sealer from flowing over the edges and onto the sides of the abutments or piers. Application shall not be made when the air temperature is below 60° F. or when rain or storm action is forecast during the next four hours.

Basis of Payment. Penetrating sealer for the bridge seats will be paid for at the lump sum price for BRIDGE SEAT SEALER which price shall be full compensation for furnishing all materials, equipment and labor to complete the work.

CONCRETE JOINT SEALER: This work shall consist of furnishing all the required materials, and the placement of a concrete joint sealer of a two-component, cold-applied, elastomeric, polymer type and a rod of polychloroprene, rubber or any other approved material, to seal the horizontal joint in the roadway slab, as shown on the plans and as herein described, and all incidental and collateral work required to perform the work as directed by the Engineer.

Materials. The sealing compound shall be a liquid polymer type compound produced by mechanically mixing on the job site, in accordance with manufacturer's recommendations, a liquid base polymer with a suitable curing component to form a homogeneous, liquid mixture suitable for filling and adhering to joints by pouring.

The polymer compounds designated herein shall be of a consistency that will permit their use at all temperatures above 50° F. and shall be capable of completely filling the joint without formation of air holes or discontinuities.

Curing of the polymer compounds is to be by chemical reaction of the two components and not by evaporation of solvent or fluxing of harder particles. The sealant shall cure track and tack-free to traffic within 5 - 6 hours at 70° F. and rising.

The materials forming the sealing compound shall comply with the following requirements:

Penetration, 77° F., 150 gms., cone 5 sec.	0.3-1.3 cms.
Bond Extension Test, -20° F., 3 cycles	
Dry concrete block	Pass *
Wet concrete block	Pass *
Flow at 200° F.	0-0.5 cms.
Resilience Test - Recovery	
Air-cured	70 plus percent
Oven-aged	70 plus percent

* None of the specimens shall develop any crack, separation, or other opening in the sealing compound or between the sealing compound and concrete block.

The joint closure, as shown on the plans, shall be made with rod stock of polychloroprene, rubber or any other approved material of the size designated. The rod material when tested for 50% compression at 77° F., as designated in ASTM D1056-58T, shall have a recovery of not less than 90%.

The joint materials, herein described, shall be furnished by the manufacturer in substantial containers of a type, size and kind commonly used for the purpose, so constructed as to insure acceptance and safe delivery by carriers. The shipping containers for the components of the sealing compound shall be clearly marked by the manufacturer with the name of material, name of manufacturer, brand name, weight, batch number, and recommended proportioning and handling procedures.

Certification. Prior to approval and use of the materials, the Contractor shall submit a notarized certification by the formulator and manufacturer of these materials, stating that they meeting the requirements as set forth herein.

Testing. When tests are required by the Engineer they shall be performed in accordance with ASTM D-1191 except as herein modified. If so specified or if permissible by the manufacturer's recommendation, test specimens may be prepared by hand mixing in the designated proportions. If so specified by the manufacturer, the laboratory specimens shall be mixed by a laboratory size proportioning and mixing unit furnished by the manufacturer. The mixing and proportions shall be as recommended by the manufacturer.

All test specimens shall be conditioned or cured in air for 24 hours plus or minus 1 hour at a temperature of 75° plus/minus 7° F.

(a) Penetration. A 6 oz. seamless ointment-can shall be overfilled with the compound, the excess overfill struck off with a spatula or similar tool, and set aside to cure. Care should be taken to avoid entrapment of air. Five penetration readings shall be taken at a distance of not less than 1/2 inch from the edge of the can. The results of the penetrations shall be recorded as the average of the five readings.

(b) Bond. The test shall be run at -20° plus/minus 4° F. for three cycles. The test with wet blocks shall be made with blocks that have been immersed in water for a minimum of 24 hours, wiped free of water with a clean dry cloth and immediately assembled and filled.

(c) Flow at 200° F. The specimens shall be trimmed immediately after filling, the test shall be made at 200° F. plus/minus 2° F.

(d) Resilience. A specimen shall be prepared as described above for the penetration test. Following the 24 hour air cure at 75° F., it shall be maintained in air at a temperature of 77° F. plus/minus 2° F. for one hour. It shall then be placed in position in a penetrometer, ASTM Designation: D5, except that a steel ball having a diameter of 0.675" plus/minus 0.005" attached to a shaft of 0.2175" diameter and 1.9375" long with a suitable extension for inserting in the penetrometer, shall be substituted for the needle. The total weight of the moving plunger shall be 75 grams.

The ball shall be placed in contact with the surface of the specimen in air at 77° plus/minus 2° F. and the indicating dial shall be set at zero. The ball shall be loaded manually to cause it to penetrate the specimen to a dial reading of 100 at approximately a uniform rate in 10 seconds. The ball shall be locked in this position and held for 5 seconds, during which time the indicating dial shall be reset to zero. The locking mechanism shall then be released. At the end of 20 seconds, the indicating dial shall be read. Resilience of the original sample, expressed as a percentage, shall be reported as 100 minus the dial reading.

The specimen shall be placed in an air circulated oven at 158° plus/minus 2° F. for 24 hours. It shall then be removed and held at room temperature for one hour. It shall be maintained in air at a temperature of 77° F. plus/minus 2°, for one hour and then tested for resilience

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as above described. The result shall be reported as resilience of the over-aged sample.

Application. The faces of all joints to be sealed shall be free of all foreign matter curing compound, oils, grease, dirt, free water, and laitance. Concrete joints to be sealed shall be free of cracked or spalled areas. Any cracked areas shall be chipped back to sound concrete before placing joint sealer.

The concrete joint sealant shall be applied only when the ambient temperature is 68° F. and rising.

A continuous length of rod of the size designated on the plans, shall be placed in the joint opening at the depth below the finished surface of the joint shown on the plans. The surface of the rod shall be wiped clean with solvent (toluene or xylol) before installation.

All sealing compound shall be placed with an applicator recommended by the manufacturer, and the mixing and placing instructions of the manufacturer shall be adhered to. A copy of these directions and the specifications for the applicator to be used shall be filed with the Division of Materials.

No sealing compound shall be placed in a joint on any material (joint filler or expansion board) containing any bituminous material until a separating barrier of foil or other suitable material has been placed on top of bituminous material in such a manner so that the sealing compound cannot contact the bituminous material. No material that will allow bitumen to soak through may be used. When it is deemed necessary to prevent bonding of the sealing compound to a joint surface, the Engineer may require the Contractor to place, at no extra cost, paper, plastic, or foil barriers over the joint surface before applying the sealing compound.

The joint must be covered with a masking tape before the application of the protective coat on the bridge deck to prevent the spray from filming the vertical faces.

All bridge joints shall be filled to 1/4 inch below the finished surface of the joint. This is to be interpreted to mean that the surface of the sealant shall be level and the point of its contact with the sidewalls of the joint shall be 1/4 inch below the finished surface of the joint.

Any sealing compound that is not bonded to the joint wall or face twenty-four hours after placing shall be removed and the joint shall be cleaned and resealed at the Contractor's expense.

Basis of Payment. The cost of furnishing and placing the closure rod and polymer compound joint sealer, as herein described, shall be incidental to the contract and no additional compensation will be allowed.

Protection of Public Utility Property. The Contractor for this improvement is advised that entry on Commonwealth Edison Company property has been authorized by the terms of an agreement between Commonwealth Edison Company and the Department. The Contractor's operations are to be governed by the applicable portions of the Standard Specifications and the following:

Any operations by the Contractor on Commonwealth Edison Company property shall be performed in a manner satisfactory to Edison Company so as not to interfere with the operations, maintenance, and access to electric lines and facilities of the Company.

Any equipment which is used in connection with the construction of the improvement shall not exceed or have an operating capability to exceed fifteen (15) feet above the existing ground line, nor shall said equipment be operated within twenty (20) feet of structures of Edison Company.

The Contractor shall erect, install and maintain adequate barriers, shoring and sheeting which meet with Edison Company's approval, in such locations where in the reasonable opinion of the Company such barriers are required to protect its steel towers, poles and other facilities, said barriers, shoring and sheeting shall be removed upon completion of construction if so requested by Edison Company.

The Contractor shall not commence construction on Edison Company's property until all facilities owned by Edison Company have been rearranged to provide clearance for said construction.

The Contractor shall notify Commonwealth Edison's Operating Manager (Northbrook Telephone Number 312-272-3900) 48 hours prior to commencement of any work around Edison Company's facilities.

The Contractor shall assume responsibility for and shall bear and pay all costs and expense for all damages to real or personal property of the Company on account of or arising out of the granting of the herein described right of entry. In this connection the Department requires the Contractor, or Contractors working in, on, over across and adjacent to said property, to carry Workmen's Compensation, Public Liability and Property Damage Insurance with minimum limits of $300,000/$500,000 for public liability and $200,000 for property damage and in addition thereto, said contractor, shall furnish, in the name of Commonwealth Edison Company, an owner's Landlord and Tenants Policy with limits of $500,000/$1,000,000 for Public Liability and $100,000 for Property Damage.

The Contractor shall restore Commonwealth Edison Company's property substantially to the same condition it now exists upon Contractor's completion of work.

Pipe Drains and Pipe Underdrains, Drain Pipe and Tile. No open joint pipe will be allowed for the underdrains used along the edge of pavement and pipe drain outlets. The material requirements of the Standard Specifications for Road and Bridge are further modified as follows:

607.02 Materials. Revise Item (b), (c) and (n) of this Article to read:

"(b) Perforated Concrete Sewer Pipe, Extra Strength.....709.07
(c) Extra Strength Perforated Clay Pipe.....709.10
(n) *Concrete Sewer Pipe, Extra Strength.....709.07"

Revise Note 1 to read:

"Unless otherwise specified, the gages for steel and aluminum pipe of various sizes shall be that shown in Article 511.03, Table I, for pipe having up to 3 feet of cover over the top of the pipe except that 6" diameter pipe shall be 18 gage."

709.05 Drain Tile. Revise the second sentence of this Article to read:

"The tile furnished, unless otherwise provided, shall be that designated as Heavy-Duty Drain Tile."

709.07 Concrete Sewer Pipe, Extra Strength. Add the following paragraph to this Article:

"Perforated concrete sewer pipe extra strength shall conform in all respects to the requirements of Concrete Sewer Pipe Extra Strength, except that the pipe shall contain perforations in the bottom one-half. The perforations shall be 3/8 inch in diameter, plus or minus 1/16 inch, spaced 3 inches center to center in horizontal rows. The rows shall be approximately 3 inches on centers and the holes in the rows staggered. Pipe of 6 and 8 inches internal diameters shall contain 4 horizontal rows of perforations and pipe of 10 inches internal diameter shall contain 6 rows of perforations. The perforations shall not extend into the bells or spigot ends of the pipe."

709.10 Standard Strength Perforated Clay Pipe. Revise this Article to read:

"709.10 Extra Strength Perforated Clay Pipe. Extra strength perforated clay pipe shall conform to the requirements of ASTM C 211."

709.12 Concrete Drain Tile. Revise the first sentence of this Article to read:

"Concrete drain tile shall conform to the requirements of ASTM C 412 except that the minimum crushing strength as set forth therein shall be 1400 pounds per lineal foot and the aggregate shall conform to the requirements of Article 703.02 and 704.02 with the exception of gradation."

709.13 Perforated Concrete Pipe. Revise the first sentence of this Article to read:

"Perforated concrete pipe shall conform to the requirements of ASTM C 444 and all applicable requirements of ASTM Specifications C 14 For Concrete Sewer, Storm Drain, and Culvert Pipe, Table 2, except that the aggregate shall conform to the requirements of Articles 703.02 and 704.02 with the exception of gradation."

Added 8-27-71

709.14 Perforated Bituminized-Fibre Drainage Pipe,
and
709.15 Bituminized-Fibre Pipe. Add the following to these Articles:

". . . except the coupling may be an internal-lock coupling meeting the requirements of ASTM D 2818 or of a material and design approved by the Engineer."

709.16 Perforated Asbestos Cement Underdrain Pipe. Revise the first sentence of this Article to read:

"Perforated asbestos cement underdrain pipe and fittings shall conform with the requirements of AASHO M 189, except that the minimum crushing strength shall be 1400 pounds per lineal foot."

Added 8-27-71

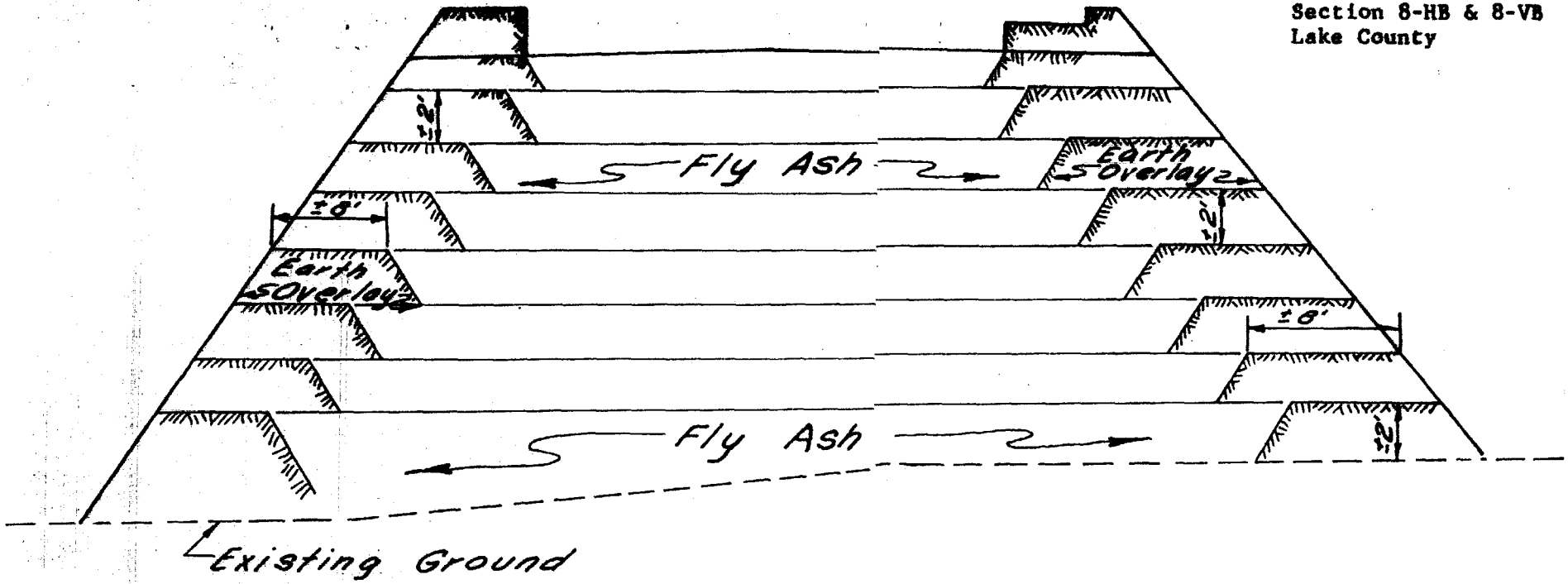
BORROW EXCAVATION (FLY ASH): At the option of the Contractor, electrically precipitated fly ash may be used as borrow material to construct the proposed embankment.

The electrically precipitated fly ash shall be placed in the proposed embankment to the lines and grades shown in the plans and in accordance with the detail included on Sheet 28 of these Special Provisions as directed by the Engineer and as herein specified.

The electrically precipitated fly ash shall be placed at a moisture content of 15 to 35 percent, based on dry weight, in lifts no greater than six inches in thickness, loose measure; then tilled to a depth of seven inches to prevent lensing and to break up lumpy materials; compacted to a minimum of 85 percent of the Standard Laboratory Density, AASHO designation T-99 (Method C) and to a minimum 5,000 psf penetration resistance value as obtained by the use of a direct reading pocket pentrometer.

The electrically precipitated fly ash shall be measured for payment by taking cross sections before the material is placed and again after the electrically precipitated fly ash and earth overlay have been completed. The volume, in cubic yards, shall be computed by the method of average end areas.

The cost of performing the work as herein specified, will be paid for at the contract unit price per cubic yard for BORROW EXCAVATION, which price shall include all necessary labor, materials and equipment required to complete the work.



DETAIL OF PLACING FLY ASH AND EARTH OVERLAY

If the Contractor elects to use electrically precipitated fly ash to construct the proposed embankment, the earth overlay shall be placed along the slopes in accordance with Section 207 of the Standard Specifications, followed by placing of fly ash to complete the first 24 inches of fill. This procedure will be continued alternately until the entire embankment has been completed.

F.A. Route 42
Section 8-HB & 8-VB
Lake County

Added August 30, 1971

Contract No. 28266

Route FA-42

Section 8(HB&VB)

County LAKE

Coded Pay Items. The pay items in the Schedule of Prices are abbreviated and have code numbers assigned. The complete wording of the pay items, the abbreviations and the code numbers used in the Schedule of Prices are listed below, for pay items not listed in code books.

Pay Item	Unit	Abbreviation	Code Number
TERMINAL SECTION, SINGLE RAIL	EACH	TERM SECT SIN RL	X62801
TRAFFIC CONTROL AND PROTECTION, STD. 2310 (SPEC.)	EACH	TR CONT-PROT 2310 SPL	XZ1017
TRAFFIC CONTROL AND PROTECTION, STD. 2315	L SUM	TRAF CONT & PROT 2315	XZ1088
BRIDGE SEAT SEALER	L SUM	BRIDGE SEAT SEALER	XZ1073

State of Illinois
Department of Public Works and Buildings
Division of Highways

NONDISCRIMINATION CLAUSES
(NONFEDERAL-AID CONTRACTS)

In addition to all other labor requirements set forth in this proposal and in the Standard Specifications for Road and Bridge Construction, adopted January 2, 1971, during the performance of this contract, the Contractor for itself, its assignees, and successors in interest (hereinafter referred to as the "Contractor") agrees as follows:

(1) Compliance With Laws of State of Illinois: The Contractor agrees: That in accordance with "An Act to Prohibit Discrimination and Intimidation on Account of Race or Color in Employment Under Contracts for Public Buildings or Public Works," approved July 8, 1933, as amended, no person shall be refused or denied employment in any capacity on the ground of race or color, nor be discriminated against in any manner by reason thereof in connection with the performance of this contract; nor shall any unfair employment practice, as defined in the "Fair Employment Practices Act," approved July 21, 1961, as amended, be committed by the Contractor, his subcontractors, suppliers of materials or services to the Contractor or his subcontractors or any labor organizations furnishing skilled or unskilled labor to the Contractor or his subcontractors.

(2) Nondiscrimination: The Contractor, with regard to the work performed by it after award and prior to completion of the contract work, will not discriminate on the ground of race, color, or national origin in the selection and retention of subcontractors, including procurements of materials and leases of equipment. The Contractor will not participate either directly or indirectly in the discrimination prohibited by Section 3 of the Fair Employment Practices Act.

(3) Solicitations for Subcontracts, Including Procurements of Materials and Equipment: In all solicitations either by competitive bidding or negotiation made by the Contractor for work to be performed under a subcontract, including procurements of materials or equipment, each potential subcontractor or supplier shall be notified by the Contractor of the Contractor's obligations under this contract relative to nondiscrimination on the ground of race, color, or national origin.

(4) Information and Reports: The Contractor will permit access to its books, records, accounts, other sources of information, and its facilities as may be determined by the awarding agency to be pertinent to ascertain compliance with the aforecited laws. Where any information required of a Contractor is in the exclusive possession of another who fails or refuses to furnish this information, the Contractor shall so certify to the awarding agency and shall set forth what efforts it has made to obtain the information.

(5) Sanctions for Noncompliance: In the event of the contractor's noncompliance with the nondiscrimination provisions of this contract, the awarding agency shall impose such contract sanctions as it may determine to be appropriate, including, but not limited to

(a) withholding of payments to the contractor under the contract until the contractor complies, and/or

(b) cancellation, termination, or suspension of the contract, in whole or in part.

(6) Incorporation of Provisions: The contractor will include the provisions of paragraph (1) through (6) in every subcontract, including procurements of materials and leases of equipment. The contractor will take such action with respect to any subcontract or procurement as the awarding agency may direct as a means of enforcing such provisions including sanctions for noncompliance.

State of Illinois
Department of Public Works and Buildings
Division of Highways

SPECIFIC EQUAL EMPLOYMENT OPPORTUNITY RESPONSIBILITIES NONFEDERAL-AID CONTRACTS

Effective March 20, 1969

1. General

   a. The requirements set forth herein shall constitute the specific affirmative action requirements under this contract and supplement the non-discrimination requirements contained elsewhere in this proposal.

   b. The contractor will work with the State of Illinois, Division of Highways in carrying out equal employment opportunity obligations and in reviews of his activities under the contract.

   c. The contractor, and all his subcontractors holding subcontracts (not including material suppliers) of $10,000 or more, will comply with the following minimum specific requirement activities of equal employment opportunity. The contractor will include these requirements in every subcontract of $10,000 or more with such modification of language as is necessary to make them binding on the subcontractor.

2. Equal Employment Opportunity Policy

The contractor will accept as his operating policy the following statement which is designed to further the provision of equal employment opportunity to all persons without regard to their race, color, religion, sex, or national origin, and to promote the full realization of equal employment opportunity through a positive continuing program:

> It is the policy of this Company to assure that applicants are employed, and that employees are treated during employment, without regard to their race, religion, sex, color or national origin. Such action shall include: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship, preapprenticeship, and/or on-the-job training.

3. Equal Employment Opportunity Officer

The contractor will designate and make known to the State highway department contracting officers an equal employment opportunity officer (hereinafter referred to as the EEO Officer) who must be capable of

effectively administering and promoting an active contractor program of equal employment opportunity and who must be assigned adequate authority and responsibility to do so.

4. Dissemination of Policy

a. All members of the contractor's staff who are authorized to hire, supervise, promote, and discharge employees, or who recommend such action, or who are substantially involved in such action, will be made fully cognizant of, and will implement, the contractor's equal employment opportunity policy and contractual responsibilities. To insure that the above agreement will be met, the following actions will be taken as a minimum:

(1) Periodic meetings of supervisory and personnel office employees will be conducted before the start of work and then not less often than once every six months, at which time the contractor's equal employment opportunity policy and its implementation will be reviewed and explained. The meetings will be conducted by the EEO Officer or other knowledgeable company official.

(2) All new supervisory or personnel office employees will be given a thorough indoctrination by the EEO Officer or other knowledgeable company official covering all major aspects of the contractor's equal employment opportunity obligations within thirty days following their reporting for duty with the contractor.

(3) The EEO Officer or appropriate company official will instruct all employees engaged in the direct recruitment of employees for the project relative to the methods followed by the contractor in locating and hiring minority group employees.

b. In order to make the contractor's equal employment opportunity policy known to all employees, prospective employees and potential sources of employees, i.e., schools, employment agencies, labor unions (where appropriate), college placement officers, etc., the contractor will take the following actions:

(1) Notices and posters setting forth the contractor's equal employment opportunity policy will be placed in areas readily accessible to employees, applicants for employment and potential employees.

(2) The contractor's equal employment opportunity policy and the procedures to implement such policy will be brought to the attention of employees by means of meetings, employee handbooks, or other appropriate means.

5. Recruitment

a. When advertising for employees, the contractor will include in all advertisements for employees the notation: "An Equal Opportunity Employer." He will insert all such advertisements in newspapers, or other publications, having a large circulation among minority groups in the area from which the project work force would normally be derived.

b. The contractor will, unless precluded by a valid bargaining agreement, conduct systematic and direct recruitment through public and private employee referral sources likely to yield qualified minority group applicants, including, but not limited to, State employment agencies, schools, colleges and minority group organizations. To meet this requirement, the contractor will, through his EEO Officer, identify sources of potential minority group employees, and establish with such identified sources procedures whereby minority group applicants may be referred to the contractor for employment consideration.

c. The contractor will encourage his present employees to refer minority group applicants for employment by posting appropriate notices or bulletins in areas accessible to all such employees. In addition, information and procedures with regard to referring minority group applicants will be discussed with employees.

6. Personnel Actions

a. Wages, working conditions, and employee benefits shall be established and administered, and personnel actions of every type, including hiring, upgrading, promotion, transfer, demotion, layoff, and termination, shall be taken without regard to race, color, religion, sex, or national origin. The following procedures shall be followed:

(1) The contractor will conduct periodic inspections of project sites to insure that working conditions and employee facilities do not indicate discriminatory treatment of project site personnel.

(2) The contractor will periodically evaluate the spread of wages paid within each classification to determine any evidence of discriminatory wage practices.

(3) The contractor will periodically review selected personnel actions in depth to determine whether there is evidence of discrimination. Where evidence is found, the contractor will promptly take corrective action. If the review indicates that the discrimination may extend beyond the actions reviewed, such corrective action shall include all affected persons.

(4) The contractor will investigate all complaints of alleged discrimination made to the contractor in connection with his obligations under this contract, will attempt to resolve such complaints, and will take appropriate corrective action. If the investigation indicates that the discrimination may affect persons other than the complainant, such corrective action shall include such other persons. Upon completion of each investigation the contractor will inform every complainant of all of his avenues of appeal.

7. Training and Promotion

a. The contractor will assist in locating, qualifying and increasing the skills of minority group employees and applicants for employment.

b. Consistent with his manpower requirements and as permissible under Federal and State regulations, the contractor will make full use of training programs, i.e., preapprenticeship, apprenticeship, and/or on-the-job training programs for the geographical area of contract performance.

c. The contractor will advise employees and applicants for employment of available training programs and entrance requirements for each.

d. The contractor will periodically review the training and promotion potential of minority group employees and will encourage eligible employees to apply for such training and promotion.

8. Unions

If the contractor relies in whole or in part upon unions as a source of his work force, he will use his best efforts to obtain the cooperation of such unions to increase minority group opportunities within the unions, and to effect referrals by such unions of minority group employees. Actions by the contractor, either directly or through a contractor's association acting as his agent, will include the procedures set forth below:

a. Use his best efforts to develop, in cooperation with the unions, joint training programs aimed toward qualifying more minority group members for membership in the unions and increasing the skills of minority group employees so that they may qualify for higher paying employment.

b. Use his best efforts to incorporate an equal employment opportunity clause into all union agreements to the end that such unions will be contractually bound to refer applicants without regard to their race, color, religion, sex, or national origin.

c. In the event a union is unable to refer applicants as requested by the contractor within the time limit set forth in the union agreement, the contractor will, through his recruitment procedures, fill the employment vacancies without regard to race, color, religion, sex, or national origin, making full efforts to obtain qualified minority group persons.

9. Subcontracting

a. The contractor will use his best efforts to utilize minority group subcontractors or subcontractors with meaningful minority group representation among their employees.

b. The contractor will use his best efforts to assure subcontractor compliance with their equal employment opportunity obligations.

10. Records and Reports

a. The contractor will keep such records as are necessary to determine compliance with the contractor's equal employment opportunity obligations. The records kept by the contractor will be designed to indicate:

(1) The number of minority and nonminority group members employed in each work classification on the project.

(2) The progress and efforts being made in cooperation with unions to increase minority group employment opportunities (applicable only to contractors who rely in whole or in part on unions as a source of their work force).

(3) The progress and efforts being made in locating, hiring, training, qualifying, and upgrading minority group employees.

(4) The progress and efforts being made in securing the services of minority group subcontractors or subcontractors with meaningful minority group representation among their employees.

b. All such records must be retained for a period of three years following completion of the contract work and shall be available at reasonable times and places for inspection by authorized representatives of the State of Illinois, Division of Highways.

c. The contractor will submit to the State highway department a monthly report for the first three months after construction begins, and thereafter upon request, for the duration of the project, indicating the number of minority and nonminority group employees currently engaged in each work classification required by the contract work.

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS AND BUILDINGS
DIVISION OF HIGHWAYS

REQUIRED PROVISIONS -- STATE CONTRACTS

Effective April 1, 1965
Revised February 1, 1969

I. SELECTION OF LABOR

The Contractor shall comply with all Illinois statutes pertaining to the selection of labor.

II. FAIR EMPLOYMENT PRACTICES

In addition to all other labor requirements set forth in this proposal the Contractor agrees as follows:

> In accordance with "An Act to prohibit discrimination and intimidation on account of race or color in employment under contracts for public buildings or public works," approved July 8, 1933, as amended, no person shall be refused or denied employment in any capacity on the ground of race or color, nor be discriminated against in any manner by reason thereof in connection with the performance of this contract; nor shall any unfair employment practice, as defined in the "Fair Employment Practices Act," approved July 21, 1961, as amended, be committed by the contractor, his subcontractors, suppliers of materials or services to the contractor or his subcontractors or any labor organizations furnishing skilled or unskilled labor to the contractor or his subcontractors.

Furthermore, during the performance of this contract, the Contractor agrees as follows:

> (1) The Contractor will not discriminate against any employee or applicant for employment because of race, creed, color, or national origin. The Contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without regard to their race, creed, color, or national origin. Such action shall include, but not be limited, to the following: employment, upgrading, demotion or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The Contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided by the Division of Highways contracting officer setting forth the provisions of this nondiscrimination clause.

(2) The Contractor will, in all solicitations or advertisements for employees placed by or on behalf of the Contractor, state that all qualified applicants will receive consideration for employment without regard to race, creed, color, or national origin.

(3) The Contractor will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice, to be provided by the Division of Highways contracting officer, advising the said labor union or workers' representative of the Contractor's commitments under this section, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

(4) The Contractor will comply with all laws, rules, and regulations pertaining to nondiscrimination in employment.

(5) The Contractor will furnish all information and reports required by the Department and will permit access to his books, records, and accounts by the Department for purposes of investigation to ascertain compliance with such laws, rules, and regulations.

(6) In the event of the Contractor's noncompliance with the nondiscrimination clauses of this contract or with any of the said laws, rules, and regulations, this contract may be cancelled, terminated, or suspended in whole or in part and the Contractor may be declared ineligible for further contracts.

(7) The Contractor will include the provisions of paragraphs (1) through (7) in every subcontract or purchase order unless exempted by laws, rules, and regulations, so that such provisions will be binding upon each subcontractor or vendor. The Contractor will take such action with respect to any subcontract or purchase order as the Department may direct as a means of enforcing such provisions, including sanctions for noncompliance.

III. SUBLETTING OR ASSIGNING THE CONTRACT

1. The contractor shall perform with his own organization contract work amounting to not less than 50 percent of the original total contract price, except that any items designated by the State as "Specialty Items" may be performed by subcontract and the amount of any such "Specialty Items" so performed may be deducted from the original total contract price before computing the amount of work required to be performed by the contractor with his own organization.

a. "His own organization" shall be construed to include only workmen employed and paid directly by the contractor and equipment owned or rented by him, with or without operators.

b. "Specialty Items" shall be construed to be limited to work that requires specialized knowledge, craftsmanship or equipment not ordinarily available in contracting organizations qualified to bid on the contract as a whole and in general are to be limited to minor components of the overall contract.

2. In addition to the 50 percent requirement set forth in paragraph 1 above, the contractor shall furnish (a) a competent superintendent or foreman who is employed by him, who has full authority to direct performance of the work in accordance with the contract requirements, and who is in charge of all construction operations (regardless of who performs the work), and (b) such other of his own organizational capability and responsibility (supervision, management, and engineering services) as the State highway department contracting officer determines is necessary to assure the performance of the contract.

3. The contract amount upon which the 50 percent requirement set forth in paragraph 1 is computed includes the cost of materials and manufactured products which are to be purchased or produced by the contractor under the contract provisions.

4. Any items that have been selected as "Specialty Items" for the contract are listed as such in the Special Provisions, bid schedule, or elsewhere in the contract documents.

5. No portion of the contract shall be sublet, assigned or otherwise disposed of except with the written consent of the State highway department contracting officer, or his authorized representative, and such consent when given shall not be construed to relieve the contractor of any responsibility for the fulfillment of the contract. Request for permission to sublet, assign or otherwise dispose of any portion of the contract shall be in writing and accompanied by (a) a showing that the organization which will perform the work is particularly experienced and equipped for such work, and (b) an assurance by the contractor that the labor standards provisions set forth in this contract shall apply to labor performed on all work encompassed by the request.

IV. STATEMENTS AND PAYROLLS

1. The submission by the contractor of payrolls, or copies thereof, is not required. However, each contractor and subcontractor shall preserve his weekly payroll records for a period of three years from the date of completion of this contract.

2. All wages paid by the Contractor and subcontractors shall be in compliance with "An Act regulating wages of laborers, mechanics and other workmen employed in any public works by the State, County, City or any public body or any political Subdivision or by anyone under contract for public works", approved June 26, 1941, as amended, except that where a prevailing wage violates a Federal law, order, or ruling, the rate conforming to the Federal law, order, or ruling shall govern. The Contractor shall submit a certificate of compliance with the aforementioned Act upon completion of the contract. The Contractor may use BC Form 749 for submission of this statement.

3. The payroll records shall contain the name, address and social security number of each employee, his correct classification, rate of pay, daily and weekly number of hours worked, itemized deductions made and actual wages paid.

4. The contractor will make his payroll records available at the project site for inspection by the State highway department contracting officer or his authorized representative, and will permit such contracting officer or representative to interview employees during working hours on the job.

V. NONSEGREGATED FACILITIES

(Applicable to State Financed Construction Contracts and related subcontracts exceeding $10,000 which are not exempt from the Equal Opportunity Clause).

By submission of this bid, the execution of this contract or subcontract, or the consummation of this material supply agreement, as appropriate, the bidder, construction contractor, subcontractor, or material supplier, as appropriate, certifies that he does not maintain or provide for his employees any segregated facilities at any of his establishments, and that he does not permit his employees to perform their services at any location, under his control, where segregated facilities are maintained. He certifies further that he will not maintain or provide for his employees any segregated facilities at any of his establishments, and that he will not permit his employees to perform their services at any location, under his control, where segregated facilities are maintained. He agrees that a breach of this certification is a violation of the Equal Opportunity clause in this contract. As used in this certification, the term "segregated facilities" means any waiting rooms, work areas, restrooms and washrooms, restaurants and other eating areas, timeclocks, locker rooms and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing facilities provided for employees which are segregated by explicit directive or are in fact segregated on the basis of race, creed, color, or national origin, because of habit, local custom, or otherwise. He agrees that (except where he has obtained identical certifications from proposed subcontractors and material suppliers for specific time periods), he will obtain identical certifications from proposed subcontractors or material suppliers prior to the award of subcontracts or the consummation of material supply agreements, exceeding $10,000 which are not exempt from the provisions of the Equal Opportunity clause, and that he will retain such certifications in his files.

State of Illinois
Department of Public Works and Buildings
Division of Highways

ERRATA TO THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, Adopted January 2, 1971

Effective July 1, 1971

Page No.	Article or Subarticle	Description
273	505.04(d)	Insert the following two sentences for the second sentence of this subarticle: "Amounts of mixing water in excess of 5 gallons per bag of cement including free water in the aggregate, shall not be used. Cement content shall not be less than 6 nor greater than 7 1/2 bags per cubic yard.
287	505.06(c)(7)	Sixth line of this subarticle correct word "e posed" to "exposed" and in 10th line correct word "un erstood" to "understood."
315	507.04(s)(4)	In the last line of the second paragraph between the words "arc" and "welding" add "automatic."
357	511.03 Table I	Correct the gauges for Type 1A and 1 pipe 42 inch nominal diameter steel and aluminum to read: "14" for steel and "12" for aluminum.
358	Table II	Add an asterisk to the column Type 1A & 1 Minimum Fill Height
430	614.02(b)	Change reference article from "710.03" to "710.04."
539	704.03(c)	Add the following as the first sentence of Note 2/ of this subarticle. "Gradation CA 8 for Class I Mixture A may, at the option of the Contractor, be obtained by blending gradation CA 7 (as modified in Article 704.01(c) Note 2) with CA 13 or CA 16."
640	718.05	Passing No. 100 sieve, change "98" to "92."
649	718.85	Change this article number from "718.85" to "718.15."
680-681	803.02(c)	Delete the last sentence of the fifth paragraph of this subarticle which reads: "When concrete is furnished from a commercial plant; which at the same time is supplying concrete for other purposes, the scale shall be provided with an extra weigh beam to be used solely for weighing the cement."
712	Index D	Change the page reference for Delineators metal posts from page "565" to page "566."

State of Illinois
Department of Public Works and Buildings
Division of Highways

SUPPLEMENTAL SPECIFICATION
FOR
SECTION 408. PORTLAND CEMENT CONCRETE PAVEMENT
SECTION 409. CONTINUOUSLY REINFORCED PORTLAND CEMENT CONCRETE PAVEMENT
SECTION 625. CURING PORTLAND CEMENT CONCRETE

Effective July 1, 1971

This Supplemental Specification amends the provisions of the Standard Specifications adopted January 2, 1971, and shall be construed to be part thereof superseding any conflicting provisions thereof applicable to the work under the contract.

408.08 Mixing Concrete. Revise the third sentence of the first paragraph to read:

"For mixers having a capacity of 2 cubic yards or less, the mixing time, after all materials except water are in the drum, shall be not less than one minute; for mixers having a capacity of more than 2 cubic yards, the minimum mixing time shall be 75 seconds except as indicated in Article 408.08(a)."

Revise the first sentence of subarticle 408.08(a)(2) to read:

"Where no mixer performance tests are made, minimum mixing time for mixers of more than 2 cubic yard capacities shall be 75 seconds, providing that blending of materials during charging is achieved to the satisfaction of the Engineer."

Revise the first paragraph of subarticle 408.08(a)(3) to read:

"Where mixer performance tests have been made on given concrete mixtures in accordance with the Standard Methods adopted by the Illinois Division of Highways, the acceptable mixing time may be reduced for those particular circumstances to the mixing time which test results indicate to be satisfactory mixing. In no event will mixing time as herein described be less than 50 seconds."

Delete the second paragraph of subarticle 408.08(a)(3) and all of subarticles 408.08(a)(4), (5), (6) and (7).

Change subarticle 408.08(a)(8) to 408.08(a)(4) and revise to read:

"The Contractor will be allowed to test 2 mixing times within the range specified, and if satisfactory results are not obtained from the required tests, the mixing time shall continue to be 75 seconds for the remainder of the contract."

Change subarticle numbers 408.08(a)(9), (10) and (11) to read (5), (6) and (7), respectively.

Revise the first 2 sentences of subarticle 408.08(b) to read:

"Transit mixed concrete will be permitted on mainline pavement less than 1/2 mile in length of portland cement concrete pavement or base course and areas outlined in Article 408.13(a)(3) and shall be produced as specified in Article 504.11. Transit mixed concrete may be permitted on contracts exceeding 1/2 mile in length of portland cement concrete pavement or base course providing the ready-mixed plant is certified under the latest NRMCA certification of Ready Mix Concrete Production Facilities and produces concrete as specified below."

408.20 Slip Form Method. Add the following sentence to the third paragraph of this article:

"If the Contractor is able to construct the pavement in a manner such that there is no measurable edge slump or misalignment, the Engineer may waive the use of the false form."

408.23 Protective Coat. Add the following sentence to the second paragraph of this article:

"When concrete pavements have been cured with resin-base membrane curing compounds, as outlined in Article 625.04, the surface shall be brushed prior to the application of the protective coat."

409.08(a) Strike-Off of Concrete and Placement of Reinforcement. Revise paragraph one to read:

"Pavement reinforcement shall be placed in the pavement at the depths shown on the plans in accordance with one of the four following methods. The method to be used shall be at the option of the Contractor. However, if Method A, C or D is used and the equipment or operation used in placing the reinforcement does not meet the requirements, the Department reserves the right to require the reinforcement to be placed as specified in Method B and the Contractor will receive no added compensation by reason of such change."

Add the following to this article:

"(4) Method D - Pavement reinforcement may be placed using a method which does not require transverse steel or support chairs for support of the longitudinal steel. Tie bars will, however, still be required at the longitudinal joint or joints when this method is used. The tie bar may be placed above the longitudinal steel provided the clearance from the pavement surface to the tie bar is not less than 2½" and the longitudinal steel is within the specified tolerances."

625.01(a) Index Table of Curing and Protection of Concrete Construction. Revise the Protection Methods for Slope Wall as shown in this table from "625.08(a), (b), (c)" to "625.06."

625.04(d) Membrane Curing Method. Substitute the following two paragraphs for the first paragraph of this subarticle:

"Membrane curing will not be permitted where waterproofing is to be applied or at areas where rubbing or a normal finish is required or at construction joints other than necessary in pavement or base course. Concrete at these locations shall be cured by another method specified in this section at no additional cost to the Department.

"Where a protective coat is used only resin-base membrane curing compound will be permitted."

State of Illinois
Department of Public Works and Buildings
Division of Highways

SPECIFICATION
FOR
STABILIZED SHOULDERS AND SUB-BASE

Effective October 1, 1970

Revised July 1, 1971

This specification stipulates the requirements for stabilized shoulders and sub-base. Stabilized Sub-base may consist of cement aggregate mixture, or bituminous aggregate mixture, or pozzolanic aggregate mixture. Stabilized Shoulders shall be bituminous aggregate mixture only.

When, in accordance with the provisions of this specification, time limitations or weather conditions require that construction of a particular type of stabilization be discontinued, the Contractor shall proceed without delay with the construction of an alternate type which is permissible under the requirements of this specification. The Contractor shall receive no added compensation by reason of such change. Except as previously specified, the selection of the particular type of mixture will be the option of the Contractor; however, when construction of a particular type of stabilization is begun, no change in type will be permitted unless authorized by the Engineer.

BITUMINOUS AGGREGATE MIXTURE

Description. The work shall consist of a mixture of aggregate and bituminous material, plant-mixed and constructed on a prepared subgrade.

Materials. Materials shall meet the requirements of the following Articles of Section 700 - Materials:

	Item	Article
(a)	Aggregate (Note 1)	704.05
(b)	Bituminous Materials (Note 2)	713.01 - 713.07 & 713.11

Note 1. When blending is approved, fine material will be permitted in the blend provided that the Fine Aggregate is Class C quality or higher and the Mineral Filler complies with the requirements of Article 718.05.

Blending proportions shall not be changed during the progress of the work without permission from the Engineer.

The gradation of the aggregate and/or the combined gradations of the aggregates shall conform to the required limits, except there shall be not less than 3% permitted to pass the number 200 sieve on an unwashed sample, as determined by the combined hot bin proportions.

Note 2. The following bituminous material shall be used for various types of construction:

Stabilized sub-base: Asphalt Cement - Grade 200-300, 150-200, 120-150, 100-120 or MC-3000 Liquid Asphalt. Stabilized Shoulders: Asphalt Cement - Grade 200-300, 150-200, 120-150, 100-120.

When more than one grade is shown for a particular type, the Engineer reserves the right to specify the grade which shall be used.

The bituminous material shall not be changed during the progress of the work without permission from the Engineer.

Samples. A 1/2 gallon sample of the bituminous aggregate mixture for each 5,000 tons produced shall be taken by the Engineer for extraction tests. A minimum of three samples shall be submitted. The sample shall be a composite sample taken from at least 5 trucks.

A one-quart sample of the bituminous material being used shall be taken by the Engineer at the same time the bituminous aggregate mixture sample is taken. The sample shall be taken from the line leading to the asphalt bucket or pug mill spray bar or directly from the asphalt bucket or spray bar. Asphalt Cement shall be submitted in a one-quart friction top can and liquid asphalt, MC-3000, in a one-quart screw top can.

Equipment. The equipment shall meet the requirements of the following articles of Section 800 - Equipment:

	Item	Article
(a)	Three-wheel Roller (Note 1)	801.01
(b)	Tandem Roller (Note 1)	801.01
(c)	Self-Propelled Pneumatic-tired Roller (Note 2)	801.01
(d)	Trench Roller (Note 3)	801.01
(e)	Hot Mix Plant (Note 4)	802.01
(f)	Mechanical Spreader (Note 5)	802.03

Note 1. Three wheel rollers and tandem rollers shall weigh not less than 6 tons nor more than 12 tons, and shall have a compression on the drive wheels of not less than 190 pounds nor more than 400 pounds per inch width of roller.

Vibrating rollers or vibrating compactors will be permitted if approved by the Engineer.

Note 2. The self-propelled pneumatic-tired roller shall develop a compression of not less than 300 pounds per inch of width of tire tread in contact with the bituminous surface.

Note 3. Trench rollers shall be self-propelled and shall develop a compression of not less than 300 pounds nor more than 400 pounds per inch of width on the compaction wheel.

Note 4. For bituminous aggregate mixture, a hot mix plant conforming to Article 802.01 will be required except: Articles 802.01(d), (f), (g), (i), (p), (q), (r) and (v) shall not apply. When the aggregates are blended, aggregate feeders for each size shall be provided according to Article 802.01(d). If Mineral Filler is used, Article 802.01(I) shall also apply. A metering system for the collected dust will not be required.

Note 5. The mechanical spreader shall be a spreading and finishing machine meeting the requirements of Article 802.03 or it may be a type approved by the Engineer.

General Conditions. The bituminous aggregate mixture shall be constructed only when the temperature in the shade is above 50° F. when liquid asphalt is used. No mixture shall be placed on a frozen or muddy roadbed. In specific cases, the Engineer may order, in writing, waiver of this limitation.

Composition of Bituminous Aggregate Mixture. The aggregate and bitumen shall be proportioned within the following composition limits by weight:

Ingredient	Per cent by Weight
Aggregate	94.0 to 96.0
Residual Bitumen	4.0 to 6.0*

*Upper limit may be raised for the lower or top lifts if the Contractor elects to use a highly absorptive aggregate requiring more than 6% asphalt. The additional asphalt shall be furnished at no cost to the Department.

The percentage of residual bitumen shall be set by the Engineer. The right is reserved by the Engineer to make such changes in proportions during the progress of the work, as he may consider necessary. The amount of residual bitumen used in the top lift of shoulders normally will be increased up to 0.5% more than that used in the lower lifts.

Preparation of Bituminous Materials. When asphalt cement is used, it shall be transferred to the asphalt tanks and heated to a temperature of 250° - 350° F. If the loading temperature exceeds 350° F. the asphalt shall not be used until it has cooled to 350° F. When liquid asphalt is used, the bituminous material shall be heated to such a temperature that it will be workable when used. Wide variations in temperature that affect the quantity of asphalt delivered will not be permitted.

Preparation of Bituminous Aggregate Mixture. The aggregate shall be dried and heated in the revolving drier to a temperature of 250° F. to 325° F.

The aggregate and bituminous material used in the bituminous aggregate mixture shall be measured separately and accurately by weight or by volume. The devices used in weighing or measuring the aggregate and bituminous material shall be of a type approved by the Engineer. The bituminous aggregate mixture shall be made in an approved mixer. When the aggregate is in the mixer, the bituminous material shall be added and mixing continued until a homogeneous mixture is produced in which all particles of the aggregate are coated. The mixing period, size of the batch or the production rate of continuous mixers shall be approved by the Engineer.

When liquid asphalt, MC-3000 is used, the foregoing requirements for the bituminous aggregate mixture using asphalt cement shall apply, except the ingredients for the bituminous aggregate mixture shall be heated and combined in such a manner and at such a temperature as to produce a mixture which when discharged from the pug mill shall be workable, but at no time shall the temperature of the mixture be more than 225° F., or the flash point of the bituminous material. The aggregate shall be surface dry and shall contain not more than one per cent of moisture by weight.

The ingredients shall be heated and combined in such a manner as to produce a bituminous mixture which when discharged from the mixer will, in general, vary not more than 20°F. from the temperature set by the Engineer. When using asphalt cement, the temperature of the mixture shall not be more than 325°F.

The Contractor may substitute up to 1000 tons, per contract, of Class I Mixture A, B, or C, prepared according to Article 406 of the Standard Specification for Bituminous Aggregate Mixture. This mixture is intended for use in leveling the sub-base and in areas where small quantities of sub-base are required. The Engineer reserves the right to specify the mix to be used.

Transportation of Bituminous Aggregate Mixture. Any truck that causes excessive segregation of material by its spring suspension or other contributing factors, or that causes undue delays shall, when directed by the Engineer, be removed from the work until such conditions are corrected. Trucks shall have tight dump bodies which have been previously cleaned of all foreign material and sprayed with distillate oil. The body of the truck shall be in a completely raised position when sprayed with the distillate oil, and it shall remain in this position until all excess oil has drained from the truck body. When Asphalt Cement is used in the mixture, no truck insulation or covering will be required during clement weather if the mixture can be delivered and placed so that the temperature of the mixture behind the spreader is 200°F. or higher. If this temperature is not obtained, the trucks shall be insulated and covered as required under Article 406.13. Truck covering may be required during inclement weather when Liquid Asphalt MC-3000 is used. Unless artificial light satisfactory to the Engineer is provided, no bituminous mixture which cannot be placed and compacted during daylight shall be delivered at the work.

Subgrade. The subgrade shall be prepared in accordance with Articles 212.03, 212.04, 212.08 and 212.09. Reference therein to base course shall be construed to include bituminous aggregate mixture.

Placing and Compacting Bituminous Aggregate Mixtures. After the subgrade has been compacted and is acceptable to the Engineer, the bituminous aggregate mixture shall be spread upon it with a mechanical spreader. The thickness of mixture spread shall be such as to provide a maximum of 4" compacted layer, except the top lift of shoulders shall be a nominal 2" compacted layer. The surface of each layer shall be clean and dry before succeeding layers are placed.

If the Contractor elects to substitute an approved vibrating roller for one of the required rollers to compact the bituminous aggregate mixture, the compacted lift thickness on the lower lifts may be increased to 6" provided the required density is obtained.

As soon as practical after the layer has been spread, it shall be compacted. The density shall be obtained by an approved vibrator compactor and a roller or by the use of two rollers except that for subbase the compaction may be obtained using equipment which meets the approval of the Engineer provided the density and other requirements contained herein are met. Rollers shall be operated at a speed of not more than 175 feet per minute. After compaction, the first layer shall have a density of not less than 88 per cent of the theoretical density. Subsequent layers shall be compacted to not less than 90 per cent of theoretical density. In small, variable and/or confining areas not to exceed 3,000 square yards or 1,000 lineal feet per day only one roller will be required. In any case, if the density of a layer is less than required, additional compaction and/or the use of an additional roller will be required.

The theoretical density shall be determined by the high pressure air meter, or at the option of the Engineer it may be computed from the saturated surface dry specific gravity of the aggregate and the specific gravity of the asphalt at 77° F.

The density of each of the finished layers of bituminous aggregate mixture shall be obtained from specimens furnished by the Contractor. Specimens shall be cut by the Contractor from the finished layer with a core drill. The diameter of a specimen shall in no case be less than 3 7/8 inches nor more than 4 inches. Four specimens shall be taken for each day's run. When directed by the Engineer, additional specimens shall be taken, but the total number from one day's run shall not exceed 20. The Contractor shall remove the specimens at locations designated by and in the presence of the Engineer and transport them to a location designated by the Engineer. Extreme care shall be taken to avoid damage to the specimens. The holes caused by the removal of the specimens shall be refilled immediately with a bituminous mixture meeting the approval of the Engineer, and compacted and finished to his satisfaction. When Liquid Asphalt MC-3000 is used, the Engineer may elect to determine the density by the Sand Cone Method. The cost of the work required in taking and transporting the specimens, and in refilling the holes caused by removal of the specimens shall not be paid for separately, but shall be included in the unit price bid per square yard for the type work specified.

The bituminous aggregate mixture shall be delivered at a temperature of 225° F. to 325°F.

When Liquid Asphalt, MC-3000, is used, the foregoing requirements for placing and compacting the bituminous aggregate mixture containing Asphalt Cement shall apply, except no specific delivery temperature for the bituminous mixture will be required.

The amount of stabilized sub-base constructed in advance of the pavement shall be limited to that which can reasonably be expected to be surfaced during the current construction season. The Contractor shall be responsible for replacement or repair of any sub-base left unsurfaced through the winter.

Any areas of the Stabilized Shoulders and Sub-base which have been damaged shall be repaired by the Contractor at his expense and to the satisfaction of the Engineer.

CEMENT AGGREGATE MIXTURE

Description. This item shall consist of a mixture of portland cement, aggregate, and water, plant-mixed and constructed on a prepared subgrade.

Materials. Materials shall meet the requirements of the following Articles of Section 700 - Materials:

	Item	Article
(a)	Portland Cement (Note 1)	701.01 - 701.05
(b)	Water.	702.01 - 702.02
(c)	Aggregate (Note 2)	704.05

Note 1. Only Type I or Type 1A portland cement, conforming to Article 701.01 shall be used.

Bulk cement may be used providing the equipment for handling the cement is approved by the Engineer. The portland cement shall be incorporated in the work as specified by the Engineer.

Note 2. The aggregate shall meet the following gradation requirements:

Passing 1" sieve	100%
Passing 1/2" sieve	60-100%
Passing No. 4 sieve	55-75 %

Passing No. 8 sieve	40-65 %
Passing No. 200 sieve	5-12 %

When blending is approved, fine material will be permitted in the blend provided that the Fine Aggregate is Class C quality or higher and the Mineral Filler complies with the requirements of Article 718.05.

Blending proportions shall not be changed during the progress of the work without permission from the Engineer.

Equipment. The equipment shall meet the requirements of the following Articles of Section 800 - Equipment:

	Item	Article
(a)	Three-wheel Roller (Note 1)	801.01
(b)	Tandem Roller (Note 1).	801.01
(c)	Tamping Roller (Note 2)	801.01
(d)	Pneumatic-tired Roller.	801.01
(e)	Trench Roller (Note 3)	

Note 1. Three-wheel rollers and tandem rollers shall weigh from 6 to 12 tons and shall have a compression on the drive wheels of not less than 190 pounds nor more than 400 pounds per inch width of roller.

Vibrating rollers or vibrating compactors will be permitted if approved by the Engineer.

Note 2. In addition to the requirements of Article 801.01, the tampers shall be long enough to penetrate within one inch of the prepared subgrade on the initial rolling.

Note 3. Trench rollers shall be self-propelled and shall develop a compression of not less than 300 pounds nor more than 400 pounds per inch of width on the compaction wheel. The width of the compaction roll shall be not less than 20 inches and its diameter shall be not less than 60 inches. Trench rollers shall meet the approval of the Engineer.

General Conditions. Except in specific cases, when otherwise permitted by the Engineer in writing, the cement aggregate mixture shall be placed only when the air temperature in the shade is above 40° F. The amount of cement aggregate mixture constructed shall be limited to that which can be surfaced during the current construction season. No cement aggregate mixture shall be deposited on a frozen or muddy roadbed. In specific cases, the Engineer may order, in writing, waiver of this limitation.

Composition of Cement Aggregate Mixture. The quantity of portland cement to be added to the aggregate shall be not less than 5 or more than 8 per cent of the oven dry weight of the aggregate. The actual proportions of cement, water and aggregate material will be set by the Engineer before work begins and will be based on tests conducted on mixtures composed of the samples of the constituent materials furnished by the Contractor, in accordance with Article 303.03. The cement content shall be determined in the laboratory in accordance with AASHO T 135 and AASHO T 136 and shall be such that the loss in weight will not be more than 10% after 12 cycles of wetting and drying and freezing and thawing.

The optimum moisture content and standard density shall be determined in accordance with AASHO T 134.

Mixing. The constituents of the mixture shall be accurately proportioned and thoughly mixed in a mechanical mixer at a central mixing plant. The control of the mixture shall be of such accuracy that the quantity of cement shall be within ± 0.3 percentage points of the amount set by the Engineer.

The measuring devices for proportioning the mixture, either by volume or by weight, shall be of such accuracy that the proportions of the mixture will be maintained within the tolerances set forth in this specification. The equipment used must be provided with means, meeting with approval of the Engineer, for calibration and check tests of the measuring devices.

In all plants, the water shall be proportioned by weight or volume and there shall be means by which the Engineer may readily verify the amount of water per batch or the rate of flow for continuous mixing.

The Contractor shall provide a platform scale and make arrangements for the use of a certified truck scale of sufficient capacity for calibration and periodic check tests of the feeders or measuring devices as needed during production.

The mixer shall be capable of producing a uniform mixture. Mixing operations shall be continued until all ingredients are distributed evenly throughout the mixture and a uniform mixture, free of segregation, satisfactory to the Engineer, is obtained. The mixer shall be capable of discharging the mixture without undue segregation. The moisture content at the time of mixing shall be such that the moisture content at the time of compaction will be within 85 to 110 percent of the optimum moisture determined.

Subgrade. The subgrade shall be prepared in accordance with Articles 212.03, 212.04, 212.08 and 212.09. References therein to base course shall be construed to include cement aggregate mixture.

Placing and Compacting Cement Aggregate Mixture. The construction methods for Sub-base Granular Material, Type A, as stipulated in Section 213 shall govern, insofar as they apply, to the construction of the cement aggregate mixture, except as hereinafter stated. References to granular material in Secion 213 shall be construed to include cement aggregate mixture.

The cement aggregate mixture shall be spread for the full width of the subbase.

Depositing and spreading operations shall be conducted so that the total time elapsing from the time water is added to the mixture until compaction is started will be less than 60 minutes. The compaction operations must be started within 30 minutes from the time the material is deposited on the roadbed.

If for any reason construction operations are delayed or suspended and the Engineer orders any loose or uncompacted material removed and disposed of, the Contractor shall perform this work at his own expense.

The cement aggregate may be constructed in one layer. If the denaity requirement cannot be complied with by placement in a single layer then the mixture shall be constructed in two approximately equal layers. The first layer shall be maintained in a moistened condition by means of a fine spray until the succeeding layer is placed. Just prior to placing the second layer the upper 1/2" of the existing layer shall be scarified.

The density of the full depth of each compacted layer shall, at no location, be less than 100 per cent of the standard dry density as determined herein. If the density does not comply with this requirement, the condition shall be corrected or the material replaced to meet these specifications.

The density shall be determined for compliance with these specifications as determined by the Engineer in accordance with AASHO T 191 or by other methods by the Engineer.

The type, size, and number of compactors, and the rate of their operations, shall be such that the section being processed will be fully compacted within 2 hours of the time that the water is added to the mixture.

The cement aggregate mixture within the section being processed shall be constructed the full width and depth, and the surface shall be trimmed and finished within a single working day.

No cement aggregate mixture may be salvaged.

Finishing. When initial compaction of the top layer of the cement aggregate mixture is nearing completion, the surface shall be shaped to the required lines, grades, and cross section, and compaction continued until uniform and adequate compaction is attained. The moisture content of the surface material shall be maintained by means of a fine spray at or slightly above its optimum during all finishing operations and until curing material is applied.

Curing. The cement aggregate mixture shall be protected and covered for 7 days as provided in Article 303.14 except that the covering material shall be liquid asphalt RC-250. Not more than 24 hours shall elapse after completion of the finishing operations before the liquid asphalt is applied upon the surface. References in Article 303.14 to soil-cement base course shall be construed to include cement aggregate mixture. At least three days shall elapse after completion of the finishing operations before a surface course is placed.

Construction Joints. At the end of each day's construction, or when construction operations are delayed or suspended and the Engineer so orders, a straight transverse construction joint shall be formed by cutting back into the completed work to form a vertical face. Damage to completed work shall be avoided.

POZZOLANIC AGGREGATE MIXTURE

Description. This item shall consist of a mixture of lime, pozzolan, aggregate, and water, plant-mixed and constructed on a prepared subgrade, in accordance with the requirements of these specifications, and to the lines, grades, thicknesses, and cross sections shown on the plans, or established by the Engineer.

Materials. All materials shall meet the requirements of the following Articles of Section 700 - Materials:

Item	Article
(a) Water	702.01 - 702.02
(b) Aggregate (Note 1)	704.05
(c) Lime (Note 2)	
(d) Pozzolan (Note 3)	
(e) Bituminous Material	713.01 - 713.06, 713.10, 713.11

Sieve	Minimum Percent Passing
1/2 inch	100%
3/8 inch	95%
No. 10	75%

The moisture content of dampened pozzolan shall not exceed 35 per cent.

Samples. The Contractor, shall at his own expense, submit to the Engineer a minimum of 25 pounds of lime, 50 pounds of fly ash, and 100 pounds of the aggregate which he proposes for use in the pozzolanic mixture. The lime, when sampled, shall immediately be placed in a sealed container and shall be kept sealed. Samples shall be furnished at least 45 days prior to the construction of the pozzolanic subbase. The samples as submitted will be tested for acceptance of materials and also to determine whether or not they will produce a satisfactory mixture; and will be used to determine preliminary proportions for the mixture composition.

Equipment. The equipment shall meet the requirements of the following Articles of Section 800 - Equipment:

	Item	Article
(a)	Three-wheel Roller (Note 1)	801.01
(b)	Tandem Roller (Note 1)	801.01
(c)	Tamping Roller (Note 2)	801.01
(d)	Pneumatic-tired Roller	801.01
(e)	Trench Roller (Note 3)	

Note 1. Three-wheel rollers and tandem rollers shall weigh from 6 to 12 tons and shall have a compression on the drive wheels of not less than 190 pounds nor more than 400 pounds per inch width of roller.

Vibrating rollers or vibrating compactors will be permitted if approved by the Engineer.

Note 2. In addition to the requirements of Article 801.01, the tampers shall be long enough to penetrate within one inch of the prepared subgrade on the initial rolling.

Note 3. Trench rollers shall be self-propelled and shall develop a compression of not less than 300 pounds nor more than 400 pounds per inch of width on the compaction wheel. The width of the compaction roll shall be not less than 20 inches and its diameter shall be not less than 60 inches. Trench rollers shall meet the approval of the Engineer.

General Conditions. Except in specific cases, when otherwise permitted by the Engineer in writing, the pozzolanic aggregate mixture shall be constructed between April 15 and September 15 and only when the air temperature in the shade is above 40° F. The amount of pozzolanic aggregate mixture constructed shall be limited to that which can be surfaced during the current construction season. No mixture shall be deposited on a frozen or muddy roadbed. In specific cases, the Engineer may order, in writing, waiver of this limitation.

Composition of Pozzolanic Aggregate Mixture. The lime, pozzolan, and aggregate shall be proportioned within the following limits on a dry-weight basis:

Ingredient	PER CENT BY WEIGHT OF TOTAL DRY MIXTURE	
	Gravel, Crushed Stone Crushed Slag or Aggregate Blend	Boiler Slag
Lime	2 to 5	2 to 4
Pozzolan	8 to 16	15 to 30
Aggregate	79 to 90	56 to 78

The actual proportions of lime, pozzolan, water, and aggregate will be set by the Engineer before work begins and will be based on tests conducted on mixtures composed of samples of the constituent materials furnished by the Contractor. The right is reserved by the Engineer to make such changes in proportions during the progress of the work as he may consider necessary.

The composition of the mixture shall be such that when molded into cylinders, cured and tested as stated in the following paragraph, the cylinders shall have a minimum average compressive strength of 400 psi and no individual test shall be lower than 300 psi, and such that the loss in weight shall not be more than 10% after 12 cycles of freezing and thawing when tested in accordance with the applicable paragraphs of ASTM C 593.

Test cylinders shall be molded at the optimum moisture content and maximum density in accordance with AASHO T 180, Method C, except that the 5 lift requirement is replaced with 3 lifts and no replacement of coarse aggregate (+ 3/4 inch sieve) is made. The molded specimens shall immediately be placed in an oven with forced air circulation for 7 days at 100 $\pm$ 3° F. At the end of 7 days, the test cylinders for compressive strength testing shall be removed from the containers, allowed to cool to room temperature, soaked for 4 hours, capped and broken for compressive strength within one hour of time of removal from water.

Mixing. The constituents of the mixture shall be accurately proportioned and thoroughly mixed in a mechanical mixer at a central mixing plant. The measuring devices for proportioning the mixture, either by volume or by weight shall be of such accuracy that the proportions of the mixture based on total dry weight will be maintained within the following tolerances.

Lime	$\pm$ 0.3 percent by weight
Pozzolan	$\pm$ 1.5 percent by weight
Aggregate	$\pm$ 2.0 percent by weight

The equipment used must be provided with means, meeting with approval of the Engineer, for calibration and check tests of measuring devices. In all plants, the water shall be proportioned by weight or volume and there shall be means by which the Engineer may readily verify the amount of water per batch or the rate of flow for continuous mixing.

The moisture content at the time of mixing shall be such that the moisture content at the time of compaction will be within 85 to 110 percent of the optimum moisture determined. The contractor shall provide a platform scale and make arrangements for the use of a certified truck scale of sufficient capacity for calibration and periodic check tests of the feeders or measuring devices as needed during production.

Mixing operations shall be continued until all ingredients are distributed evenly throughout the mixture and a uniform mixture, free of segregation, is obtained. The mixer shall be capable of discharging the mixture without undue segregation.

Subgrade. The subgrade shall be prepared in accordance with Articles 212.03, 212.04, 212.08 and 212.09. References therein to base course shall be construed to include pozzolanic aggregate mixture.

Placing and Compacting and Finishing Pozzolanic Aggregate Mixture. The pozzolanic aggregate mixture shall be constructed in layers not more than 8 inches (compacted) in thickness. When the thickness specified is more than 8 inches the mixture shall be placed in 2 or more approximately equal layers. Each layer shall be deposited, full width directly on the prepared subgrade or on the preceding layer of compacted mixture with a mechanical spreader or spreader box of a type approved by the Engineer. Where the mixture must be placed in more than one layer, the previous layer shall be maintained in a moistened condition until the succeeding layer is placed. After having been tested for density and approved by the Engineer, the previous layer shall be dampened with water if required by the Engineer and roughened immediately prior to placing the succeeding layer so that the layers are knit together. The second layer must be placed the same day as the first layer. When placed, the pozzolanic aggregate mixture shall be free from segregation and shall require minimum blading and manipulation.

The pozzolanic subbase shall be compacted to at least 97% of maximum density except that if more than one layer is required the first layer shall be compacted to 97% of maximum density and succeeding layers shall be compacted to 100% of maximum density.

The density of each layer of the compacted subbase shall be determined by the Engineer at regular intervals in accordance with AASHO T 191 or by other methods approved by the Engineer, for compliance with these specifications. If these tests indicate that the layer does not comply with the density requirements, the condition shall be corrected or the material replaced to meet these specifications.

All pozzolanic mixture shall be placed and compacted the same day it is mixed. The entire subbase within an increment of work shall be completed within a single working day.

In constructing the top layer, the grade shall be kept at sufficient height so that the top surface, when compacted, will be at or slightly above grade, rather than below grade. Finish grading shall be accomplished by removing excess material followed by recompaction by rolling. In the event that low areas occur, they shall be loosened to the full depth of the lift, dampened with water immediately before placing additional mixture, and then rolled to the satisfaction of the Engineer.

If any subgrade material is worked into the pozzolanic aggregate mixture during the compacting or finishing operations, all pozzolanic mixture within the affected area shall be removed and replaced with new material. The Engineer may restrict hauling over partially completed work after inclement weather or at any time when the subgrade is soft and there is a tendency for the subgrade material to work into the pozzolanic aggregate mixture.

If for any reason construction operations are delayed or suspended and the Engineer orders any loose or uncompacted material removed and disposed of, the Contractor shall perform this work at his own expense. No pozzolanic aggregate mixture may be salvaged.

Curing. After the pozzolanic aggregate mixture has been constructed as specified herein, the moisture content of the surface material shall be maintained at or slightly below its optimum moisture content until the curing coat is applied. At the time the curing coat is applied, the surface shall be tightly knit and free of all loose or extraneous material. The bituminous curing coat shall be applied the day following final compaction of the mixture unless it should be delayed in the judgement of the Engineer. The bituminous curing coat used shall be that designated by the Engineer and applied at the rate of approximately 0.15 gallons per square yard. It shall be applied uniformly to the surface of the pozzolanic aggregate mixture by a pressure distributor, meeting the requirements of Article 802.05, to

produce complete coverage without excessive runoff. The exact rate of application and temperature shall be specified by the Engineer. Should it be necessary for construction equipment to use the subbase before the curing coat has cured enough to prevent pick-up, sufficient sand cover shall be applied to prevent pick-up.

The equipment used for wetting the finished pozzolanic aggregate mixture with water and to apply the bituminous material shall be of such limited weight that its use will not cause marring or rutting of the surface.

At least one day shall elapse after the curing coat is applied before the pavement is constructed.

Construction Joints and Maintenance. At the end of each day's construction, a straight transverse construction joint shall be formed by cutting back into the completed work to form a vertical face. Damage to completed work shall be avoided. The pozzolanic aggregate mixture shall be constructed and finished full width each day without longitudinal joints.

The Contractor shall maintain, at his own expense, the entire subbase in a manner satisfactory to the Engineer until the pavement has been completed. Maintenance shall include immediate repairs of any defective or damaged portions of the subbase. Repairs or replacements shall be made in such a manner as to insure restoration of a uniform surface and durability of the portion repaired or replaced. The Contractor shall also remove and replace at his own expense any pozzolanic aggregate mixture which is unsatisfactory due to its being placed over excessively wet or otherwise unstable subgrade; damaged by rain, freezing or other climatic conditions; damaged by traffic; or which is unsatisfactory due to failure to comply with any of the requirements specified herein.

STABILIZED SHOULDERS AND SUBBASE - GENERAL

Tolerance in Thickness. It is the intent that the sub-base or shoulder shall be constructed to the nominal thickness shown on the plans. Thickness determinations shall be made at such points as the Engineer may select. When the constructed thickness is less than 90 per cent of the nominal thickness, it shall be brought to nominal thickness by the addition of the applicable mixture or by removal and replacement with new mixture. However, the surface elevation of the completed sub-base or shoulder shall not exceed by more than 1/8 inch the surface elevation shown on the plans or authorized by the Engineer.

Method of Measurement. This work shall be measured for payment as follows:

When work is constructed essentially to the lines, grades or dimensions shown on the plans and the Contractor and the Engineer have agreed in writing that the plan quantities are accurate, no further measurement will be required and payment will be made for the quantitites shown in the contract for the various items involved except that if errors are discovered after work has been started, appropriate adjustments will be made.

When the plan [illegible] or when disagreement exists between the Contractor and [illegible] to the accuracy of the plan quantities, either party [illegible] work is started which would affect the measurement, [illegible] request in writing and thereby cause the quantities involved [illegible] as hereinafter specified.

Stabilized Shoulders shall be measured in place and the area computed in square yards completed in accordance with this specification. The width for measurement shall be from the edge of the pavement to the edge of the stabilized shoulder as shown on the plans or as directed by the Engineer.

Stabilized Sub-base of the thickness specified shall be measured in place and the area computed in square yards completed in accordance with this specification. The width for measurement shall be from outside to outside of the top of the final layer of the completed work as shown on the plans or as directed by the Engineer.

The liquid asphalt for the curing coat for either the cement aggregate mixture or pozzolanic aggregate mixture, and any sand cover required will not be measured for payment, but shall be considered as incidental to the contract.

Basis of Payment. This work will be paid for at the contract unit price per square yard for STABILIZED SHOULDERS or STABILIZED SUB-BASE of the thickness specified.

State of Illinois
Department of Public Works and Buildings
Division of Highways

SUPPLEMENTAL SPECIFICATION
FOR
SECTION 513. PILING

Effective July 1, 1971

This Supplemental Specification amends the provisions of the Standard Specifications, adopted January 2, 1971, and shall be construed to be a part thereof, superseding any conflicting provisions thereof applicable to the work under the contract.

513.09 Driving Piles. Add the following sub-article;

"(k) Splicing Piles. Commercially produced pile splicers, meeting the approval of the Engineer, will be permitted when splicing of the piles is required to bring the pile to the cutoff elevation specified and when approved by the Engineer in writing may be used in lieu of splices shown on the plans. The approved commercial pile splicer may also be used in lieu of splices specified in Article 513.12."

State of Illinois
Department of Public Works and Buildings
Division of Highways

SUPPLEMENTAL SPECIFICATION FOR SECTION 709. DRAIN PIPE AND TILE

Effective July 1, 1971

This Supplemental Specification amends the provisions of the Standard Specifications, adopted January 2, 1971, and shall be construed to be a part thereof, superseding any conflicting provisions thereof applicable to the work under the contract.

709.14 Perforated Bituminized-Fiber Drainage Pipe, and

709.15 Bituminized-Fiber Pipe. Add the following to these articles:

". . . except the coupling may be an internal-lock coupling meeting the requirements of ASTM D 2818 or of a material and design approved by the Engineer."

State of Illinois
Department of Public Works and Buildings
Division of Highways

SUPPLEMENTAL SPECIFICATION
FOR
SECTION 644. SODDING
SECTION 645. PLANTING

Effective July 1, 1971

This Supplemental Specification amends the provisions of the Standard Specifications, adopted January 2, 1971, and shall be construed to be a part thereof, superseding any conflicting provisions thereof applicable to the work under the contract.

644.13 Method of Measurement. Add the following sentence after the second sentence of the first paragraph of this article:

"To be acceptable, the sod shall be in a live heathy growing condition."

645.10 Planting Procedures. Add the following sentence to the third paragraph of this article:

"At no time shall the prepared backfill or other topsoil used on the job be stockpiled on turf or in ditches."

State of Illinois
Department of Public Works and Buildings
Division of Highways

SUPPLEMENTAL SPECIFICATION FOR SECTION 713. BITUMINOUS MATERIALS

Effective July 1, 1971

This Supplemental Specification amends the provisions of the Standard Specifications, adopted January 2, 1971, and shall be construed to be a part thereof, superseding any conflicting provisions thereof applicable to the work under the contract.

713.09 Emulsified Asphalts. Delete the "modified miscibility with water, %" requirements from the table in this article.

State of Illinois
Department of Public Works and Buildings
Division of Highways

SUPPLEMENTAL SPECIFICATION FOR ROADWAY EXCAVATION

Effective July 1, 1971

This Supplemental Specification amends the provisions of the Standard Specifications, adopted January 2, 1971, and shall be construed to be a part thereof superseding any conflicting provisions thereof applicable to the work under the contract.

202.03 Removal and Disposal of Surplus, Unstable and Unsuitable Materials. Substitute the following paragraph for the first two sentences of this article:

"The Contractor at his expense shall dispose of all surplus, unstable and unsuitable materials including those which result from the work included in Section 201 in such a manner that public or private property will not be damaged or endangered."

Route F.A. 42

Section 8(HB & VB)

County Lake

GENERAL PREVAILING WAGE RATES

In accordance with "An Act regulating wages of laborers, mechanics and other workmen employed in any public works by the State, County, City or any public body or any political subdivision or by any one under contract for public works," approved June 26, 1941, as amended, the Department has ascertained the general prevailing rate of per diem wages for the following labor classifications.

Labor Position	Rate per hour on which per diem rates are to be used.
Skilled Labor	
Crane Operator	7.80
Intermediate Grade Labor	
Truck Driver	5.45
Unskilled Labor	
Common Labor	6.15

The general prevailing wage rates for labor classifications other than those specified above, and the general prevailing rate for legal holiday and overtime work are on file in the main office of the Department of Public Works and Buildings, Division of Highways. Not less than these prevailing wage rates shall be paid for work performed under this contract.

The general prevailing wage rates shown DO NOT contain the fringe benefits for health and welfare, insurance, vacations and pensions paid generally, in the locality in which the work is being performed and it shall be the responsibility of the contractor to ascertain and pay the fringe benefits.

Should a prevailing rate as listed herein violate a Federal law, order, or ruling, the rate conforming to the Federal law, order or ruling shall govern. No change in compensation will be made to the Contractor as a result of his paying rates other than those specified herein.

The above mentioned Act provides that any Contractor or subcontractor who shall neglect to keep, or cause to be kept, an accurate record of names, occupations and actual wages paid to each laborer, workman and mechanic employed by him in connection with the contract, or who shall refuse to allow access to same at any reasonable hour to any representative of the Department, or to the Director of Labor and his deputies and agents, shall be guilty of misdemeanor and shall be punished by a fine not exceeding $500.00 or by imprisonment not exceeding 6 months, or by both fine and imprisonment, in the discretion of the court.

No extra compensation will be allowed to the Contractor for any delays caused by any hearing on any objection to the prevailing wage rates hereinafter specified, as provided in the above mentioned Act, or by appeal to the Circuit or Superior Court or to the Supreme Court of any decision of the Department resulting from such hearings, nor for any delay caused by compliance with the other provisions of said Act.

Prospective Bidders should familiarize themselves with all of the provisions of the Act and, in addition, should make an investigation of the existing labor conditions, and any negotiated labor agreements which may exist or are contemplated at this time. Nothing in the Act shall be construed to prohibit the payment of more than the prevailing wage scale shown above. The bidder should take all of these facts into consideration in the preparation of his proposal.

B. D. 696A
Revised October, 1967

(14335—20M—12-69) 10

STATE OF ILLINOIS

DEPARTMENT OF PUBLIC WORKS AND BUILDINGS

DIVISION OF HIGHWAYS

PROPOSAL

Name of Bidder ERIC P. LANDER CONST. CO, WINCHESTER RD

Address LIBERTYVILLE, ILLINOIS 60048

Type of Improvement F.A. Route No. 42

, Section 8(HB and VB)

Lake County, by the construction of a 3-span railroad grade separation structure (carrying Greenwood Ave. over C.& N.W. R.R.) spans 204'-5 1/2" and 1@71'-5 1/4" on R.C. open piers and pile bent abutments @ Station 15/43.11 and a 2-span grade separation structure (carrying Greenwood Ave. over the relocated F.A. Route 42) spans 2@56'-0" on R.C. open piers and pile bent abutments @ Stations 20/00 (Greenwood Ave.)

Station 15/43.11 is a point near the N.W. corner of N.W.1/4 of S.W.1/4 of Section 15, T.43N, R.12E, of the 3rd P.M.

Station 20/00 is a point near the N.E. corner of N.E.1/4 of N.E.1/4 of Section 16, T.43N, R.12E, of the 3rd P.M.

The plans for the proposed work are those prepared by the Chief Highway Engineer and approved by the Director of the Department of Public Works and Buildings on December 17, 1970

and designated as Federal-aid Route 42, Section 8(HB and VB), in Lake County.

The work covered by this proposal is described in Paragraph 1 of this Proposal.

The specifications are those prepared by the Department of Public Works and Buildings and designated as "Specifications for Road and Bridge Construction" and the "Supplemental Specifications and Special Provisions" in effect on the date of invitation for bids.

TO THE DEPARTMENT OF PUBLIC WORKS AND BUILDINGS:

In submitting this proposal, the undersigned declares that the only persons or parties interested in the proposal are those named herein, that it is made without collusion with any other person, firm or corporation, and that the proposal is in all respects fair and in good faith, without collusion or fraud.

4. The undersigned further declares that he has carefully examined the proposal, plans, specifications, form of contract and contract bond, and special provisions (if any), and that he has inspected in detail the site of the proposed work, and that he has familiarized himself with all of the local conditions affecting the contract and the detailed requirements of construction, and understands that in making this proposal he waives all right to plead any misunderstanding regarding the same.

5. The undersigned further understands and agrees that if this proposal is accepted he is to furnish and provide all necessary machinery, tools, apparatus and other means of construction, and to do all of the work, and to furnish all of the materials specified in the contract, except such materials as are to be furnished by the Department, in the manner and at the time therein prescribed, and in accordance with the requirements therein set forth.

6. The undersigned declares that he understands that the quantities mentioned are approximate only and that they are subject to increase or decrease; that he will take in full payment therefor the amount of the summation of the actual quantities, as finally determined, multiplied by the unit prices shown in the schedule of prices contained herein.

7. The undersigned further agrees that the unit prices submitted herewith are for the purpose of obtaining a gross sum, and for use in computing the value of additions and deductions; that if there is a discrepancy between the gross sum bid and that resulting from the summation of the quantities multiplied by their respective unit prices, the latter shall apply.

8. The undersigned further agrees that if the Engineer decides to extend or shorten the improvement, or otherwise alter it by additions or deductions, including the elimination of any one or more of the items, he will perform the work as altered, increased or decreased at the contract unit prices.

9. The undersigned further agrees that the Engineer may at any time during the progress of the work covered by this contract order other work or materials incidental thereto and that all such work and materials as do not appear in the proposal or contract as a specific item accompanied by a unit price, and which are not included under the bid price for other items in the contract, shall be performed as extra work, and that he will accept full compensation therefor as provided in the specifications.

10. The undersigned further agrees to execute a contract for this work and present the same to the Department within fifteen (15) days after the contract has been mailed to him.

11. The undersigned further agrees that he and his surety will execute and present within fifteen (15) days after the contract has been mailed to him, a contract bond satisfactory to and in the form prescribed by the Department of Public Works and Buildings, in the penal sum of the full amount of the contract, guaranteeing the faithful performance of the work in accordance with the terms of the contract.

12. The undersigned further agrees to begin work not later than ten (10) days after the execution and approval of the contract and contract bond, unless otherwise provided, and to prosecute the work in such manner and with sufficient materials, equipment, and labor as will insure its completion within the time limit specified herein, it being understood and agreed that the completion within the time limit is an essential part of the contract. The undersigned

agrees to complete the work within 300 working days, unless additional time shall be granted by the Engineer in accordance with the provisions of the specifications. In case of failure to complete the work on or before the time named herein, or within such extra time as may have been allowed by extensions, the undersigned agrees that the Department of Public Works and Buildings shall withhold from such sums as may be due him under the terms of this contract, the sum, as set forth in the specifications, which sum shall be considered and treated as the amount of damages due the State from the undersigned because of the additional cost of engineering and [illegible]

13. Accompanying this proposal is a proposal guaranty consisting of a bank cashier's check, bank draft, or properly certified check, complying with the requirements of the specifications, made payable to the State Treasurer of Illinois. The amount of the proposal guaranty is One hundred thousand dollars and 00/100 ($ 100,000.00).

If this proposal is accepted and the undersigned shall fail to execute a contract and contract bond as required herein, it is hereby agreed that the amount of the proposal guaranty shall become the property of the State of Illinois, and shall be considered as payment of damages due to delay and other causes suffered by the State because of the failure to execute said contract and contract bond; otherwise said proposal guaranty, or bidder's bond substituted in lieu thereof, shall be returned to the undersigned.

(For the convenience of the Bidder, the requirements for the Proposal Guaranty are shown on the reverse side of this page.)

ATTACH CASHIER'S CHECK, BANK DRAFT, OR CERTIFIED CHECK HERE

In the event that one proposal guaranty is intended to cover two or more proposals, the amount must be equal to the sum of the proposal guaranties which would be required for each individual proposal.

If the proposal guaranty is placed in another proposal, state below where it may be found, as follows:

The proposal guaranty will be found in the proposal for: Item.....

Section No. ..... in.....County.

14. The undersigned submits herewith his schedule of prices covering the work to be performed under this contract; he understands that he must show in the schedule the unit prices for which he proposes to perform each item of work, that the extensions must be made by him, and that if not so done his proposal may be rejected as irregular.

15. The undersigned further agrees that if awarded the contract for the sections contained in the following combinations, he will perform the work in accordance with the requirements of each individual proposal for the multiple bid specified in the schedule below, and that the multiple bid shall be prorated against each section in proportion to the bid submitted for the same. If an error is found to exist in the gross sum bid for one or more of the individual sections included in a combination, the multiple bid shall be corrected as provided in the specifications.

When a combination bid is submitted, the schedule below must be completed in each proposal comprising the combination.
If alternate bids are submitted for one or more of the sections comprising the combination, a combination bid must be submitted for each alternate.

SCHEDULE OF MULTIPLE BIDS

Combination No.	Sections Included in Combination	MULTIPLE BID	
		Dollars	Cents

PROPOSAL GUARANTY. Each proposal shall be accompanied by a bank draft drawn on the New York, Chicago, or St. Louis Exchange, a bank cashier's check, or a properly certified check for not less than 10 per cent of the amount bid, or for the amount specified in the following schedule.

Amount of Bid		Proposal Guaranty
Up to	$ 5,000	$ 300
$ 5,000	10,000	500
10,000	50,000	2,500
50,000	100,000	5,000
100,000	250,000	12,500
250,000	500,000	25,000
500,000	1,000,000	50,000
1,000,000	1,500,000	75,000
1,500,000	2,000,000	100,000
2,000,000	3,000,000	150,000
3,000,000	5,000,000	200,000
5,000,000	7,500,000	300,000
7,500,000	10,000,000	400,000
10,000,000	15,000,000	500,000
15,000,000	20,000,000	600,000
20,000,000	25,000,000	700,000
25,000,000	30,000,000	800,000
30,000,000	35,000,000	900,000
Over	35,000,000	1,000,000

If a multiple bid is submitted, the bank drafts, bank cashier's checks, or certified checks which accompany the individual proposals making up the combination will be considered as also covering the multiple bid.

Bank drafts, bank cashier's checks, or certified checks accompanying proposals shall be made payable to the Treasurer, State of Illinois, when the State is the awarding authority; the county treasurer, when a county is the awarding authority; or the city, village, or town treasurer, when a city, village, or town is the awarding authority.

PROJECT

ROUTE FA-42

SECTION 8(HB & VB)

COUNTY LAKE 097-1

STATE OF ILLINOIS

DIVISION OF HIGHWAYS

CONTRACT SCHEDULE OF PRICES

CONTRACT NUMBER 28266 - 79

DATE 09-03-71

PAGE NUMBER 005

PROGRAM No.

ITEM NUMBER	PAY ITEM DESCRIPTION	QUANTITY	UNIT OF MEASURE	UNIT PRICE DOLLARS	UNIT PRICE CENTS	TOTAL PRICE DOLLARS	TOTAL PRICE CTS
642006	POTASSIUM FERT NUTR	537.00	POUND		6500	349	05
642007	AGR GROUND LIMESTONE	13.80	TON	19	4400	268	27
643002	ASPHALT COATED MULCH	1.10	TON	162	0000	178	20
643005	EMULSIFIED ASPHALT	94.00	GALLON	1	6200	152	28
644001	SODDING	10,442.00	SQ YD		9700	10,128	74
644002	SUPPLE WATERING	31.00	UNIT	12	9600	401	76
646001	ENGR FIELD OFFICE A	1.00	EACH	6,585	0000	6,585	00
646003	ENGR FIELD LAB	1.00	EACH	4,692	0000	4,692	00
508006	ALUM RAILING TL	703.00	LIN FT	13	7700	9,680	31
						1,973,364	21

TOTAL

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PROJECT

ROUTE FA-42

SECTION 8(HB & VB)

COUNTY LAKE 097-1

STATE OF ILLINOIS

DIVISION OF HIGHWAYS

CONTRACT SCHEDULE OF PRICES

CONTRACT NUMBER 28266 - 79

DATE 09-03-71

PAGE NUMBER 004

PROGRAM No.

ITEM NUMBER	PAY ITEM DESCRIPTION	QUANTITY	UNIT OF MEASURE	UNIT PRICE DOLLARS	UNIT PRICE CENTS	TOTAL PRICE DOLLARS	TOTAL PRICE CTS	
616024	CONC GUTTER TB	50.00	LIN FT	5	1100	255	50	
616041	COMB CC&G TB6.24	3,709.00	LIN FT	5	7700	21,400	93	
616047	COMB CC&G TB9.12	2,444.00	LIN FT	5	3000	12,953	20	
616137	CONC MED TC4	1,537.00	SQ FT	1	3700	2,874	19	
616139	CONC MED TC4 SPL	912.00	SQ FT	2	0400	1,860	48	
616202	CONC MEDIAN SURF 4	6,058.00	SQ FT		9300	5,633	94	
618001	SLOPE WALL 4	1,205.00	SQ YD	12	1000	14,580	50	
623002	PCC DRIVEWAY PAVT 6	101.00	SQ YD	8	9700	905	97	
624003	PC CONC SIDEWALK 5	4,425.00	SQ FT	1	0400	4,602	00	
628001	SPBGR SINGLE RAIL	1,662.50	LIN FT	7	2900	12,119	63	
629003	CH LK FENCE 6	1,477.00	LIN FT	5	4000	7,975	80	
629076	CH LK GATES 6X12 DBL	2.00	EACH	162	0000	324	00	
629079	CH LK GATES 6X18 DBL	1.00	EACH	216	0000	216	00	
629110	TEMP FENCE	928.00	LIN FT	2	1600	2,004	48	
635001	PIPE HANDRAIL	4.40	LIN FT	81	0000	356	40	
639001	FUR ERECT ROW MARKERS	47.00	EACH	17	9000	841	30	
642002	SEEDING II	.50	ACRE	432	0000	216	00	
642003	SEEDING III	5.50	ACRE	540	0000	2,970	00	
642004	NITROGEN FERT NUTR	318.00	POUND		6500	206	70	
642005	PHOSPHORUS FERT NUTR	550.00	POUND		6500	357	50	

00-1

TOTAL

PROJECT

ROUTE FA-42

SECTION 8(HB & VB)

COUNTY LAKE 097-1

STATE OF ILLINOIS

DIVISION OF HIGHWAYS

CONTRACT SCHEDULE OF PRICES

CONTRACT NUMBER 28266-79

DATE 09-03-71

PAGE NUMBER 003

PROGRAM No.

ITEM NUMBER	PAY ITEM DESCRIPTION	QUANTITY	UNIT OF MEASURE	UNIT PRICE DOLLARS	UNIT PRICE CENTS	TOTAL PRICE DOLLARS	TOTAL PRICE CTS	
513021	FUR CONC PILES	1,376.00	LIN FT	4	3000	5,916	80	
513022	DRIV TIMBER PILE	3,131.00	LIN FT	2	4800	7,764	88	
513026	DRIVE STL PILE	6,298.00	LIN FT	2	4300	15,304	14	
513027	DRIVE CONC PILES	1,376.00	LIN FT	4	0700	5,600	32	
513033	TEST PILE STL 10BP42	6.00	EACH	870	0000	5,220	00	
513041	TEST PILE CONCRETE	2.00	EACH	969	0000	1,938	00	
513052	TEMP SHT PILING	6,300.00	SQ FT	2	8800	18,144	00	
514001	NAME PLATES	3.00	EACH	59	3000	179	40	
603005	STORM SEWER 1 12	169.00	LIN FT	5	6200	949	78	
603030	STORM SEWER 2 12	466.00	LIN FT	6	0700	2,828	62	
607153	PIPE UNDERDRAINS 8	611.00	LIN FT	4	7200	2,883	92	
612003	CB TA 3 DIA T3F&G	4.00	EACH	323	3000	1,293	20	
612055	CB TC T3F&G	1.00	EACH	323	3000	323	30	
612154	INLETS TA T3F&G	3.00	EACH	233	9000	701	70	
612165	INLETS TA T11F&G	2.00	EACH	233	9000	467	80	
612233	MAN ADJUST	3.00	EACH	84	3000	252	90	
612250	INLETS ADJUST	2.00	EACH	84	3000	168	60	
615001	FILL EXIST MANHOLES	11.00	EACH	34	8500	383	35	
615003	FILL EXIST INLETS	6.00	EACH	24	9000	149	40	
616006	CONC CURB TB	180.00	LIN FT	6	3000	1,134	00	
								TOTAL

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PROJECT

ROUTE FA-42

SECTION 8(HB & VB)

COUNTY LAKE 097-1

STATE OF ILLINOIS

DIVISION OF HIGHWAYS

CONTRACT SCHEDULE OF PRICES

CONTRACT NUMBER 28266-79

DATE 09-03-71

PAGE NUMBER 002

PROGRAM No.

ITEM NUMBER	PAY ITEM DESCRIPTION	QUANTITY	UNIT OF MEASURE	UNIT PRICE DOLLARS	UNIT PRICE CENTS	TOTAL PRICE DOLLARS	TOTAL PRICE CTS
301024	AGG BASE CSE A 6	1,366.00	SQ YD	1	8300	2,499	78
406001	BIT MATLS PR CT	3,615.00	GALLON		2500	903	75
406007	BIT CONC BIND CSE	2,076.00	TON	9	2500	19,203	00
406008	BIT CONC SUR CSE CL I	1,289.00	TON	11	0000	14,179	00
408006	PCC PVT 16 1/2-10 1/2	2,129.00	SQ YD	17	9100	38,130	39
408014	PROTECTIVE COAT	9,395.00	SQ YD		0900	845	55
502001	CLASS A EXC STRUCT	205.00	CU YD	5	4600	1,119	30
503002	CLASS X CONC HDWL	9.60	CU YD	236	0000	2,265	60
504003	CLASS X CONC	3,283.50	CU YD	122	9400	403,673	49
507025	STUD SHEAR CONNECTORS	3,180.00	EACH		8200	2,607	60
507030	F & E STRUCT STEEL	1.00	L SUM	184,271	0000	184,271	00
511E07	P CUL 1 36 DETOUR	164.00	LIN FT	15	2500	2,501	00
511E09	P CUL 1 48 DETOUR	220.00	LIN FT	22	9700	5,053	40
511046	P CUL 1 RCCP 15	38.00	LIN FT	7	5600	287	28
511129	P CUL 2 RCCP 24	62.00	LIN FT	12	1400	752	68
511131	P CUL 2 RCCP 36	179.00	LIN FT	20	7800	3,719	62
511370	P CUL 5 RCCP 30	189.00	LIN FT	22	2600	4,207	14
512001	REINFORCEMENT BARS	685,078.00	POUND		2360	161,678	41
513005	FUR CREO PILE 20.1-38	3,131.00	LIN FT	2	8000	8,766	80
513013	FUR STL PILE 10BP42	6,298.00	LIN FT	5	7000	35,898	60

TOTAL

PROJECT

ROUTE FA-42

SECTION 8(HB & VB)

COUNTY LAKE 097-1

STATE OF ILLINOIS

DIVISION OF HIGHWAYS

CONTRACT SCHEDULE OF PRICES

CONTRACT NUMBER 28266 - 79

DATE 09-03-71

PAGE NUMBER 001

PROGRAM No.

ITEM NUMBER	PAY ITEM DESCRIPTION	QUANTITY	UNIT OF MEASURE	UNIT PRICE DOLLARS	UNIT PRICE CENTS	TOTAL PRICE DOLLARS	TOTAL PRICE CTS
XZ1017	TR CONT-PROT 2310 SPL	3.00	EACH	29,685	0000	89,055	00
XZ1073	BRIDGE SEAT SEALER	1.00	L SUM	1,188	0000	1,188	00
XZ1088	TRAF CONT & PROT 2315	1.00	L SUM	7,680	0000	7,680	00
X62801	TERM SECT SIN RL	10.00	EACH	259	2000	2,592	00
Z10010	BARRICADES	114.00	LIN FT	21	6000	2,462	40
Z10036	BLDG REMOV	1.00	L SUM	8,424	0000	8,424	00
Z10138	CAISSON CONCRETE	131.70	CU YD	290	8000	38,298	36
201001	TREE REMOV 6-15	100.00	IN DIA	1	8400	184	00
201002	TREE REMOV OVER 15	100.00	IN DIA	1	9400	194	00
201005	TREE REMOV ACRES	4.20	ACRE	864	0000	3,628	80
202008	REM & DISP UNS MATL	44,809.00	CU YD	1	6000	71,694	40
204001	BORROW EXCAV	262,540.00	CU YD	1	5200	399,060	80
205001	SPECIAL EXCAVATION	19,228.00	CU YD	2	2300	42,878	44
207005	WATER APPLIED	5.00	UNIT	18	8500	94	25
209002	POROUS GRAN EMBANK	20,431.00	CU YD	3	3000	67,422	30
210001	TRENCH BACKFILL	116.00	CU YD	9	4700	1,098	52
213029	SUB GRAN MAT B 4	13,983.00	SQ YD	1	1600	16,220	28
215004	AGGREGATE SHLDS B	79.00	TON	5	9700	471	63
301018	STAB BASE CSE 9	14,229.00	SQ YD	4	6000	65,453	40
301020	STAB BASE CSE 11	11,001.00	SQ YD	6	0000	66,006	00
							TOTAL

OC-1

Route F.A. 42

Sec. 8(HB and VB)

County Lake

SIGNATURE SHEET

(If an individual)

Firm Name _____ (SEAL)

Signature of Owner _____ (SEAL)

Business Address _____

(If a co-partnership)

Firm Name Eric Bolander Const. Co. (SEAL)

By John E. Bolander (SEAL)

Business Address P.O. Box 39, Winchester Rd, Libertyville Tel. 600 49

Name and Addresses of All Members of the Firm

Eric Bolander Libertyville, Del

R E Bolander " "

John E. Bolander Lake Forest, Del.

Stephen Bolander Libertyville, Del

(If a corporation)

Corporate Name _____

By _____
President

Business Address _____

(Corporate Seal)

Names of Officers

President _____

Secretary _____

Treasurer _____

Attest: _____
Secretary

By signing this sheet, the contractor hereby agrees to accept, as part of the contract, the applicable Supplemental Specifications that are indicated on the Check Sheet for Supplemental Specifications and Special Provisions contained in this proposal.

STATE OF ILLINOIS

CONTRACT

11th [redacted] day of [redacted] November

1. THIS AGREEMENT, made and concluded this [redacted] day of [redacted] November 19 71, between the State of Illinois, acting by and through the Department of Public Works and Buildings, known as the party of the first part, and ERIC BOLANDER CONSTRUCTION COMPANY his/their executors, administrators, successors or assigns, known as the party of the second part.

2. WITNESSETH: That for and in consideration of the payments and agreements mentioned in the Proposal hereto attached, to be made and performed by the party of the first part, and according to the terms expressed in the Bond referring to these presents, the party of the second part agrees with said party of the first part at his/their own proper cost and expense to do all the work, furnish all materials and all labor necessary to complete the work in accordance with the plans and specifications hereinafter described, and in full compliance with all of the terms of this agreement and the requirements of the Engineer under it.

3. And it is also understood and agreed that the Notice to Bidders, Special Provisions, Proposal, and Contract Bond, hereto attached, and the Plans for FA Route No. 42 _____ Project No. _____, Section 8(HB and VB), in LAKE County, dated December 17, 19 70, and the "Standard Specifications for Road and Bridge Construction," adopted and in effect on the date of invitation for bids, are all essential documents of this contract and are a part hereof.

4. IN WITNESS WHEREOF, The said parties have executed these presents on the date above mentioned.

Attest: Richard H. Gatterman
Chief Highway Engineer.

THE STATE OF ILLINOIS
By the Department of Public Works and Buildings
By Wm. J. Cellini
Director.

Party of the First Part.

(If a corporation)

Corporate Name _____

Attest:

By _____
President.

_____
Secretary.

Party of the Second Part.

(If a Co-partnership)

(Corporate Seal)

_____ (Seal)
R. E. Bolander (Seal)
John E. Bolander (Seal)
Stephen Bolander
Partners doing business under the firm name of
Eric Bolander Construction Company (Seal)
Party of the Second Part.

(If an Individual)

_____ (Seal)

_____ (Seal)
Party of the Second Part.

CONTRACT BOND

BOND NO. 588 93 72

KNOW ALL MEN BY THESE PRESENTS, That we ERIC BOLANDER CONSTRUCTION COMPANY

a Co-partnership, of LIBERTYVILLE, ILLINOIS

as Principal, and FIDELITY AND DEPOSIT COMPANY OF MARYLAND

a corporation organized and existing under the laws of the State of MARYLAND, with authority to do business in the State of Illinois, as Surety, are held and firmly bound unto the People of the State of Illinois in the penal sum of ONE MILLION, NINE HUNDRED SEVENTY-THREE THOUSAND, THREE HUNDRED SIXTY-FOUR AND 21/100 Dollars ($1,973,364.21), lawful money of the United States, well and truly to be paid unto said People of the State of Illinois, for the payment of which we bind ourselves, our heirs, executors, administrators, successors, and assigns, jointly, severally, and firmly by these presents.

THE CONDITION OF THE FOREGOING OBLIGATION IS SUCH that whereas, the said Principal has entered into a written contract with the State of Illinois acting through the Department of Public Works and Buildings, for the construction of the work designated as FA Route No. 42, Project No. , Section No. 8(HB & VB), in LAKE County, which contract is hereby referred to and made a part hereof, as if written herein at length, in and whereby the said Principal has promised and agreed to perform said work in accordance with the terms of said contract, and has promised to pay all sums of money due for any labor, materials, apparatus, fixtures or machinery furnished to such Principal for the purpose of performing such work and has further agreed to pay all direct and indirect damages to any person, firm, company, or corporation suffered or sustained on account of the performance of such work during the time thereof and until such work is completed and accepted; and has further agreed that this bond shall inure to the benefit of any person, firm, company, or corporation to whom any money may be due from the Principal; subcontractor, or otherwise for any such labor, materials, apparatus, fixtures or machinery so furnished and that suit may be maintained on such bond by any such person, firm, company, or corporation for the recovery of any such money.

NOW THEREFORE, if the said Principal shall well and truly perform said work in accordance with the terms of said contract, and shall pay all sums of money due or to become due for any labor, materials, apparatus, fixtures or machinery furnished to him for the purpose of constructing such work, and shall commence and complete the work within the time prescribed in said contract, and shall pay and discharge all damages, direct and indirect, that may be suffered or sustained on account of such work during the time of the performance thereof and until the said work shall have been accepted, and shall hold the People of the State of Illinois and the said department of Public Works and Buildings harmless on account of any such damages, and shall in all respects fully and faithfully comply with all the provisions, conditions, and requirements of said contract, then this obligation to be void; otherwise to remain in full force and effect.

Approved this 4th day of November, A.D. 19 71

Department of Public Works and Buildings

By [signature] Director

Attest:

[signature] Chief Highway Engineer

IN WITNESS WHEREOF, We have duly executed the foregoing Obligation this 4th day of OCTOBER, A.D. 19 71

[signature] (Seal)

R. E. Bolander (Seal)

John E. Bolander (Seal)

Stephen Bolander (Seal)

Partners doing business under the firm name of Eric Bolander Const. Co. (Seal)

Surety FIDELITY AND DEPOSIT COMPANY OF MARYLAND (Seal)

By [signature] (Seal)
RONALD W. FUERMANN Attorney in Fact

By (Seal)
Attorney in Fact

Countersigned

By [signature]
RONALD W. FUERMANN Agent for Surety

69 W. WASHINGTON ST. CHICAGO, ILLINOIS
Address of Agent

STATE OF ILLINOIS
County of Lake } ss.

I, Jane-Lynn M. Grahovac, a Notary Public in and for said county, in the State aforesaid, do hereby certify that Eric Bolander, R. E. Bolander, John E. Bolander, and Stephen Bolander, who are each personally known to me to be co-partners in the partnership firm doing business under the name and style of Eric Bolander Const. Co., and also personally known to me to be the same persons who signed the above and foregoing instrument as the Principal therein, appeared before me this day in person and acknowledged that they, as such partners in said firm, signed for the said co-partnership, the above and foregoing instrument as and for the free and voluntary act of the said co-partnership firm, for the uses and purposes therein set forth.

Given under my hand and Notarial Seal, this 4th day of October, A.D. 19 71.

[signature]
Notary Public

STATE OF ILLINOIS
COUNTY OF COOK } ss:

I, Robert M. Day, a Notary Public in and for said County, in the State aforesaid, do hereby certify that RONALD W. FUERMANN Agent and Attorney-in-Fact of the Fidelity and Deposit Company of Maryland, who is personally known to me, appeared before me this day and acknowledged that he signed, sealed and delivered the foregoing instrument as his free and voluntary act as Agent and Attorney-in-Fact of the Fidelity and Deposit Company of Maryland, and as the free and voluntary act of the Fidelity and Deposit Company of Maryland, for the uses and purposes therein set forth.

Given under my hand and notarial seal this 4th day of OCTOBER 19 71

MY COMMISSION EXPIRES MARCH 25, 1975

Robert M. Day [signature]
Notary Public

Chicago 188362

L1458—30M, 188681

FIDELITY AND DEPOSIT COMPANY
OF MARYLAND

Statement of Financial Condition
JUNE 30, 1971

ASSETS

*Bonds	$33,861,200.26
*Stocks	100,357,450.00
Real Estate	4,226,830.54
Cash in Banks and Offices	4,789,556.89
Premiums in Course of Collection (less than 90 days old)	8,156,438.06
Reinsurance and Other Accounts Receivable	2,108,931.98
TOTAL ADMITTED ASSETS	$153,500,407.73

LIABILITIES, SURPLUS AND OTHER FUNDS

Reserve for Unearned Premiums		$35,759,108.61
Reserve for Claims and Claim Expenses		13,422,922.00
Reserve for Taxes and Expenses		1,207,286.85
Miscellaneous Reserves and Other Liabilities		1,612,363.69
TOTAL LIABILITIES		52,001,681.15
Capital Stock, Paid Up	$5,000,000.00	
Surplus	96,498,726.58	
Surplus as Regards Policyholders		101,498,726.58
TOTAL		$153,500,407.73

Securities carried at $1,459,887.00 in the above statement are deposited as required by law.

***Bonds carried at amortized values and stocks at June 30, 1971 market quotations. On the basis of June 30, 1971 market quotations for all bonds owned, the Company's total admitted assets would be $149,350,176.22 and surplus as regards policyholders $97,348,495.07.**

I, HARRY Y. WRIGHT, Treasurer of the FIDELITY AND DEPOSIT COMPANY OF MARYLAND, do hereby certify that the foregoing statement is a correct exhibit of the assets and liabilities of the said Company, on the 30th day of June, 1971, according to the best of my information, knowledge and belief.

Harry Y. Wright
Treasurer

STATE OF MARYLAND
CITY OF BALTIMORE } ss:

Subscribed and sworn to, before me, a Notary Public of the State of Maryland in the City of Baltimore, this 21st day of July, 1971.

Notarial Seal

Elenor K. Mitchell
Notary Public

My commission expires July 1, 1974

79
9/3/

STATE OF ILLINOIS

DEPARTMENT OF PUBLIC WORKS AND BUILDINGS

WILLIAM F. CELLINI DIRECTOR

DIVISION OF HIGHWAYS
2300 SOUTH THIRTY-FIRST STREET
SPRINGFIELD.
62706

RICHARD H. GOLTERMAN
CHIEF HIGHWAY ENGINEER

November 30, 1971

SUBJECT: Trust Agreement

Contract No. 28266

Job No. C-91-344-64

Lake
8(HB + UB)

Eric Bolander Construction Company
P. O. Box 38
Winchester Road
Libertyville, Illinois 60048

Gentlemen:

Attached is your copy of the Trust Agreement for the subject contract which was executed on November 29, 1971.

A copy of the Agreement has been forwarded to your bank.

Very truly yours,

W. E. Baumann
Engineer of Design

A V VanAusdall

By: A. V. VanAusdall
Engineer of Road Plans
and Contracts

RSB:lll

cc: R. D. Schmidt
D. E. Moredock
Design
Bank - The First National Bank of Lake Forest
Deerpath Road
Lake Forest, Illinois 60045

C-91-344-64

TRUST AGREEMENT

THIS AGREEMENT is made and entered into by and between the State of Illinois, Department of Public Works and Buildings, Division of Highways, whose address is 2300 South 31st Street, Springfield, Illinois, hereinafter called DEPARTMENT, and Eric Bolander Construction Company, whose address is P. O. Box 39, Winchester Road, Libertyville, Illinois 60048, hereinafter called CONTRACTOR, and the First National Bank of Lake Forest, P.O. Box 391, an Illinois Bank whose address is ~~Deerpath Road~~, Lake Forest, Illinois 60045, hereinafter called BANK.

WITNESSETH:

WHEREAS the DEPARTMENT has awarded to the CONTRACTOR Contract No. 28266, providing for the construction of a State highway improvement for a total price of $1,973,364.21 dollars; and

WHEREAS the DEPARTMENT has been authorized to make progress payments as the CONTRACTOR performs the work under the contract; and

WHEREAS the DEPARTMENT is required to retain a percentage of progress payments as provided by Section 4-103 of the Illinois Highway Code; and

WHEREAS the DEPARTMENT may now, by Senate Bill 728, approved September 23, 1971, at the request of the CONTRACTOR deposit the retainage under a Trust Agreement with an Illinois bank of the CONTRACTOR's choice as provided under Section 4-103 of the Illinois Highway Code as amended; and

WHEREAS by execution of this Agreement, the CONTRACTOR and said BANK request the retainage to be deposited as provided by law with said BANK:

NOW THEREFORE, the parties do hereby agree:

1. That this Agreement shall not change any of the rights, duties, privileges or responsibilities in the above construction contract except as may be provided herein.

2. That the DEPARTMENT will withhold progress payments on account of lien claims, liquidated damages, or as may otherwise be provided by the contract.

3. That all progress payments, including final payment, under the above contract shall be made by State Warrants payable to the CONTRACTOR and BANK, as trustee, jointly, and the Warrants shall be mailed to the BANK at the above address.

4. That the progress payments shall specify on a copy of State's voucher to be mailed with the Warrant the amount thereof to be paid over to the CONTRACTOR and the amount to be held by the BANK under this Agreement.

5. That the money so held by the BANK shall be described as "retainage" and shall be deemed to be held in trust according to the terms of this Agreement.

6. That the DEPARTMENT shall be the sole judge of return or repayment to the Treasurer, State of Illinois, upon demand made by the DEPARTMENT to the BANK for return or repayment of the retainage. The BANK shall make such return or repayment regardless of whether the DEPARTMENT shall state any reason therefor. If demand is made for return of retainage because the DEPARTMENT has declared the CONTRACTOR to be in default, all retainage shall be returned or repaid to the State.

7. That the repayment or return to the State shall be by check from the BANK payable to the Treasurer, State of Illinois, and shall be mailed to the DEPARTMENT within 30 days after the DEPARTMENT'S demand.

8. That the CONTRACTOR does retain any right he has had or may have in the future against the DEPARTMENT for wrongful demand for return of said retainage, or any part thereof.

9. That the CONTRACTOR does not waive or release any rights he has against the DEPARTMENT for breach of contract, including this Agreement, by reason of the repayment by the BANK.

10. That in the event demand is made under Paragraph 6, the DEPARTMENT may specify in its sole judgment the amount to be repaid or returned as all or less than all of the retainage in which event this Agreement may continue as to either any retainage held by the BANK or any future payments by the DEPARTMENT to the CONTRACTOR.

11. That upon return or repayment because the CONTRACTOR has been declared to be in default, this Agreement shall come to an end and be of no further force or effect.

12. That the BANK may invest and reinvest said retainage in:

a. Certificates of Deposit issued by a bank chartered by the State of Illinois, including this BANK;
b. United States Government Bonds;
c. United States Treasury Notes;
d. United States Treasury Bills;
e. Time Deposit Open Account;

provided, however, that the investment of said retainage shall not relieve the BANK from the return or repayment within 30 days as stated in this Agreement.

13. That the BANK shall for each party within 15 days after the end of June and December of each year render an account of retainage received by it, together with a description of the investments made and the value thereof including interest paid or accrued.

14. That at the discretion of the DEPARTMENT and with the consent of the surety for the CONTRACTOR, a semifinal estimate may be made when the principal items of work have been satisfactorily completed.

15. That the BANK shall make a semifinal payment from the retainage and interest to the CONTRACTOR on being advised by the DEPARTMENT of the amount to which the retainage shall be reduced which shall in no event be less than one percent (1%) of the adjusted contract price, or not less than $500.00.

16. That the DEPARTMENT and the CONTRACTOR agree that the date of mailing notice of final payment to the BANK shall constitute the date of final payment to the CONTRACTOR under said contract.

17. That any provisions of the contract regarding final payment shall be deemed to have been complied with regardless of any delay in the CONTRACTOR'S receiving said final payment or any retainage and interest thereon from said BANK.

18. That when said final payment is made, this Agreement shall be terminated and the retainage and interest thereon, together with any securities acquired with said money, shall be paid over to the CONTRACTOR.

19. That the BANK shall only look to the CONTRACTOR to pay any costs or fees for either its services or expenses hereunder, and no deduction shall be made therefor from any retainage or interest thereon except such deduction that may be made after final payment has been made.

IN WITNESS WHEREOF the parties have hereunder set their hands and seals this 29th day of November, 1971. (To be dated by the DEPARTMENT.)

CONTRACTOR

ATTEST:

Jane-Lynn M. Jakovac
Secretary
(Title)

Eric Bolander Construction Company
(Company Name) (Seal)

By: John E. Bolander
John E. Bolander
Partner
(Title)

CONTRACTOR (IF JOINT VENTURE)

ATTEST:

(Company Name)

By:

(Title)

(Title)

BANK

ATTEST:

(Assistant) Cashier

First National Bank of Lake Forest
(Name of Bank)

By:
(Vice) President

DEPARTMENT

ATTEST:

Chief Highway Engineer

State of Illinois
Department of Public Works & Buildings

By:
Director